Frequent users of the emergency department: a program to improve care and reduce visits

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Abstract

THE AUTHORS DESCRIBE A CASE-MANAGEMENT PROGRAM for frequent users of the emergency department. The study had a single-subject design, with evaluation for each patient of the number of visits to the emergency department for a 12-month period before referral to the program and a similar period after implementation of an individualized care plan. Referrals were made on the basis of 2 or more of the following criteria: chronic medical condition, complex medical condition, drug-seeking behaviour, violent behaviour and abusive behaviour. A multidisciplinary team developed the individualized care plans. Twenty-four patients agreed to participate. For the 12-month period before their referral, these patients accounted for a total of 616 (median 26.5) visits to the emergency department; for a similar period after implementation of the care plans, they accounted for 175 (median 6.5) visits. The difficult-case management program appeared to be effective in reducing the total number of visits to the emergency department during the study period and in improving the care for these patients.

Many patients choose to visit the emergency department for treatment that could be given in the community.[1] Examples of groups who tend to do so include homeless people,[2] those seeking drugs[3] and those with complex medical and social problems. The frustrations associated with caring for these frequent visitors can reduce morale among the nursing staff[4] and may precipitate violence in the emergency department.[5]

Individual care plans may be a solution. In one study[1] the use of individual care plans did not significantly decrease the number of visits to the emergency department; however, in that study the participation of social workers was limited, and there was no community involvement. Heavy users of the emergency department often have social or psychological problems in addition to their physical ailments.[6] Consequently, it is important that care plans be comprehensive.

Such plans should be appropriate,[7] providing consistent care for patients with complex or chronic medical conditions, addressing issues related to substance abuse or violence, involving the community in ongoing care and follow-up, and involving the patient in his or her own care. This paper describes a program to develop and implement such care plans.

Program description

St. Paul's Hospital is an inner-city tertiary care medical centre in downtown Vancouver. It has 54 000 patient visits annually. Because of its location, a large number of these patients are homeless, are unemployed or are receiving social assistance, or have complex or chronic medical problems, including HIV-related illness and substance abuse.

We developed a program to meet the needs of frequent users of the emergency department, identified by emergency staff and community care providers and referred to the Difficult Case Management Committee. This committee consisted of a social worker (who also chaired the committee), the medical director of the emergency department, the director of continuous quality improvement, the patient care manager, a

Review

Synthèse

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psychiatric nurse, a clinical nurse specialist, and family physicians, community care providers and others as appropriate. To participate in the difficult-case management program, the patient had to have visited the emergency department several times over the previous year and had to have a potential for heavy future use of the department's services. In addition, he or she had to meet 2 or more of the following criteria: chronic medical condition, complex medical condition, drug-seeking behaviour, violent behaviour or abusive behaviour.

The committee met once a month for an hour. Once a patient was identified as suitable for the program, the social worker contacted other area hospitals and community resources to determine the scope of the problem and to identify people that could be invited to the care planning meeting. Area hospitals were those within 15 km of our institution, including another tertiary care medical centre and local community hospitals. Other care providers who might be invited to participate included case managers for long-term care, homemaker coordinators, home care nurses, mental health teams, the Community Assertive Team (a community-sponsored group organized to meet the needs of the mentally ill), financial aid workers, drug and alcohol resource personnel, social services personnel, Native Health Services (a federally funded local program). If appropriate, the patient was invited to the care planning meeting or a follow-up session. Otherwise, the social worker met individually with the patient or the family (or both), first to discuss the process and the initial planning and then for 2 or 3 follow-up sessions. The care plan was always shared with the patient and with appropriate community care providers who could not attend the committee meetings. If the patient had frequented other hospitals, their emergency departments were informed of the care plans (with the patient's prior approval).

All emergency department staff were aware of this project from its inception. When the program was initiated, 8 to 10 patients were referred to the program each month. This number later increased to 20 to 30 referrals per month. Not all referrals were appropriate or urgent, and these were screened out by the social worker or by the committee. Because of time constraints, a maximum of 4 new patients were evaluated each month.

At the monthly meeting, an individual care plan was designed to address both the social and the medical needs of each new patient. The care plan listed the patient's medical history and current medications, as well as suggested medical and social interventions. The patient's status as a participant in the program was flagged in the hospital's database. On each visit to the emergency department, the plan was printed out at registration and made available to the emergency physician examining the patient. Thus, the patient spent less time recounting previous investigations and treatments. Medical evaluation and intervention were then undertaken as deemed necessary by the emergency physician.

Follow-up consisted of a review, during subsequent committee meetings, of visits to the emergency department by each participant. A patient's visits were considered appropriate if he or she required resources or physician services not readily available in the community (e.g., urgent assessment for surgery or for HIV or internal medicine care, intravenous antibiotics, or emergent laboratory or radiological tests such as ultrasonography or CT). If the care plan had not been followed, the committee reviewed the chart and the appropriateness of the plan was reassessed. If on review the plan was considered appropriate, the medical director discussed the situation with the physician who had not followed the plan. The social worker contacted community care providers for follow-up. The social work aspects of the plan and the relevant interventions were adjusted as necessary in an attempt to address any social problems contributing to visits to the emergency department. The committee was made aware of all follow-up information, and, if adjustments to the plan were required, community care providers and the family physician were invited to another planning meeting. The committee met 3 or 4 times for each patient (as part of its monthly meetings) to refine the individual care plans. Four hours of the social worker's time each week was allotted for work on this program. In addition, the social worker provided social interventions during visits to the emergency department by these patients.

To evaluate the impact of this approach, the following data were collected. The number of times that each patient visited the emergency department during the 12 months before implementation of his or her care plan was compared with the number of admissions over a similar period after implementation. Although reducing the number of visits was not the purpose of the program, we expected this number to decline. Admissions to other emergency departments in the area were checked, since we considered an increase in the frequency of visits to other hospitals a sign of an unsuccessful intervention. However, we did not include frequency of visits to other institutions in the study data. The study periods for participants were not concurrent, because patients entered the program at different times.

The data were analysed with descriptive and inferential statistics.

Preliminary outcome data

Twenty-four patients (14 men and 10 women, mean age 46 [range 20–76] years) were approached over a 2-year period and agreed to participate in the program. Their medical problems included alcohol use, drug use, personality disorder and chronic pain in 8 patients (33%) each, a history of violence and depression in 6 patients (25%) each, drug-seeking behaviour in 5 (21%), and hepatitis B or C (or both), HIV-infection and ulcers in 4 patients (17%) each. Other, less common medical conditions included cerebrovascular accident, deep vein thrombosis, seizures, previous gastrointestinal bleeding, previous pneumonia, migraine headache and Munchausen's syndrome.

These patients accounted for a total of 616 (median 26.5) visits to the emergency department for the 12-month period before referral to the program and a total of 175 (median 6.5) visits for a similar period after implementation of the individualized care plans, a statistically significant difference (Wilcoxon signed-rank test –4.02, $p < 0.001$).

Typical medical and social interventions recommended for these patients are presented in Table 1. Some patients made more visits to community clinics and family physicians as part of the care plan, although actual numbers are not known. One patient died of cancer during the study period; for this patient, the number of visits to the emergency department declined from 35 in the 12 months before referral to the program to 9 in the 6-month period between implementation of the care plan and death. Two patients moved at the end of the study period; for them, the number of visits declined from 36 in total in the 12-month period before referral to 10 in total in the 12-month period before they moved.

Inappropriate care, defined as a deviation from the proposed care plan, occurred with 5 patients (during a total of 13 visits to the emergency department). In all instances, the physician deviated from the plan. There was also a reduction in the number of visits to other institutions. However, one patient made more visits to the emergency department after the care plan was implemented (29 visits [as well as multiple visits to other hospitals] before and 44 after implementation).

Interpretation

In this study there was a dramatic reduction in the number of visits to the emergency department by patients enrolled in a difficult-case management program. The program proved effective because of adherence to the care plans, which aimed for adequate interventions in the appropriate setting. The crucial element was close follow-up for each visit. Through better use of community resources, such as supportive counselling, liaison with mental health resources and referral to a single primary care physician, we have been able to provide more consistent care. Both staff and patients have been satisfied with this program.

A blanket approach to reduce visits has little effect on frequent users of emergency department services. For example, diversion of nonurgent cases from the emergency department had no effect on frequent users.[8] Educational interventions[9,10] have also been unsuccessful. Our program, in contrast, focuses on the needs of the patient and allows a multidisciplinary approach. Frequent users often have chronic problems and are likely to be admitted to hospital.[11] One study emphasized that "efforts to cut medical costs should not limit access to the [emergency department], which often becomes an important source of medical care for such patients."[11] Unlike others,[12] we found that frequent users visited the emergency department over periods of many years. One patient died during the study, and two moved away from the community at the end of the study. Most of the other participants, who were well known to emergency staff, continued to use the hospital after implementation of their care plans, but less frequently.

There were a number of limitations to this study. By necessity, the sample was small, because of the need to individualize each care plan. Second, "appropriateness of care" needs better definition. Third, we must recognize possible confounders, such as social pressures on patients to reduce use of health care services; however, such an effect was probably not a factor here, given that most of these patients are unlikely to respond to pressures of this type. Fourth, there is a possible selection bias, because the patients were referred to the program on the basis of specific characteristics. Fifth, a validated patient and staff satisfaction survey

Table 1: Typical medical and social interventions for patients referred to the Difficult Case Management Program at St. Paul's Hospital, Vancouver

Intervention	No. (and %) of patients	
Medical		
Patient denied narcotic prescriptions in emergency department	15	(63)
Patient referred to one primary care physician	15	(63)
Patient restricted to obtaining prescriptions at one pharmacy	5	(21)
Patient limited to "fast-track" waiting room* if possible (to limit attention-seeking behaviour)	5	(21)
Care plan communicated to other emergency departments	2	(8)
Laboratory tests requested in emergency department limited	2	(8)
Patient denied benzodiazepine prescriptions in emergency department	2	(8)
Staff interaction with patient limited	1	(4)
Liaison with College of Physicians and Surgeons	1	(4)
Patient referred to pain program	1	(4)
Patient's suicide attempts to be treated seriously	1	(4)
Social		
Patient given supportive counselling (e.g., concerning addiction medication)	9	(38)
Liaison with community to enforce regular community follow-up	8	(33)
Liaison with mental health resources in the community	3	(13)
Patient accompanied by security escort in emergency department and watched for signs of violence	2	(8)
Arrangement made to have patient's medications administered by rooming house staff	1	(4)
Food services arranged for patient	1	(4)
Liaison with Pharmanet†	1	(4)
Patient's use of emergency department social services restricted	1	(4)

*Waiting room in the emergency department for patients requiring less urgent care. †Pharmanet is a computerized provincial drug program that provides liaison between pharmacies and emergency departments in BC.

would be helpful for determining future development of the program. Sixth, it would have been useful to determine the impact on community resources as a result of this program.

We conclude that our difficult-case management program is effective because of consistent follow-up, as well as the individualized nature of the patient care plans, which focus on both the medical and the social needs of patients with complex, chronic problems.

Competing interests: None declared.

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