

## Inappropriate admissions: thoughts of patients and referring doctors

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### SUMMARY

Research on inappropriate hospital admissions has tended to neglect the views of the referring doctors and the patients. In this study, the Appropriateness Evaluation Protocol was applied to a random sample of 102 emergency medical admissions. The patients and doctors were then presented with a list of possible alternatives to admission that might have been used at the point of referral.

Case notes were available for 88 patients. As judged by these, 28% of admissions were inappropriate, the commonest reason being the potential for treatment or tests to have been performed as outpatient procedures; next commonest was the possibility of lower level care. The response rate to the questionnaires was about two-thirds, for both doctors and patients. Of the general practitioners and casualty doctors who responded, 60% specified alternatives to admission that they would have considered, and the equivalent figure for patients was 70%. For both groups the major preferences were same-day outpatient assessment and admission to a community hospital.

Referring doctors and patients, in this survey, favoured alternatives to acute medical care in proportions much higher than that of supposedly inappropriate admission.

### INTRODUCTION

Surveys to estimate numbers of days of 'inappropriate' care in various hospital specialties have produced hugely varying results, but the prevailing belief is that inappropriate use exceeds 20% across a wide variety of settings<sup>1-8</sup>. Variations reflect not only different settings and organizational features but also the choice of assessment tool and the manner in which it is applied<sup>7</sup>. Although criticism is sometimes levelled at referring doctors, few attempts have been made to ask these doctors whether they would have acted differently if alternatives had been available. Furthermore, in discussions of such alternatives, the views of patients have seldom been ascertained.

The Appropriateness Evaluation Protocol (AEP), though developed in the USA, is now widely accepted in the UK and elsewhere in Europe<sup>1,4,9</sup>. As well as sorting out objective criteria to determine the need for acute care, based on clinical findings and therapy requirements (e.g. blood pressure, pulse, intravenous treatment) it offers an 'override' facility. Thus, if the objective scoring system seems to give an erroneous result, it can be overridden by a corroborator. This will often be the consultant in charge of the patient's care, but more detached assessors may be preferable.

### METHODS

The patients were all admitted acutely to the Royal Shrewsbury Hospital medical assessment unit, arriving during the four weeks from 6 November 2000. Elective admissions and transfers from other wards or departments were excluded, as were coronary care and intensive care unit direct admissions. Patients were identified within 24 hours of arrival from the previous day's admission list by means of computer generated random numbers. The medical records were scored with the Appropriateness Evaluation Protocol. Patients were then interviewed by means of a scripted questionnaire, with a time limit of 36 hours from arrival to ensure that memories were fresh. They were provided with a list of possible alternatives to admission (see Results) and invited to state any options preferred. The interviewer made clear to patients that he was not employed by the hospital and the answers would not impact on their care. When patients were too ill or too confused to answer, relatives or friends were not asked to speak on their behalf and patients were not asked later, if their condition improved. Whilst this prevented uncertainty over who should or could answer on patients' behalf and prevented any consequent misinterpretation of their wishes, it also excluded the very ill and those with severe dementia.

The referring general practitioners and casualty doctors were contacted by fax or letter. These doctors were likewise presented with a list of alternatives to acute medical admission, but the list varied in two respects from

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the patients' choices: first, referrers were asked to state whether alternatives would have been preferred or possible; secondly, they were offered a distinction between consultant and general practitioner community hospital beds. (In consultant beds patients are under the care of a consultant in rehabilitation medicine who visits weekly or fortnightly; for both types of bed, day-to-day medical care is provided by general practitioners.)

Each case was examined by the clinical nurse manager in charge of the medical assessment unit, who used the 'override' facility where indicated. The nurse manager was chosen in preference to hospital consultants, general practitioners or casualty doctors because of the need to avoid defensive interpretation, biases due to knowledge of the referrer, and the influence of hindsight. In considering the 'appropriateness' of an admission, no allowance was made for the absence of a facility. Thus, for example, if a patient was admitted solely because no community hospital bed was available, the admission would still be deemed inappropriate.

By this method 102 patients were identified.

**RESULTS**

14 sets of case notes were untraceable, so the AEP was applied to 88. 63 (72%) admissions were judged appropriate, 25 (28%) inappropriate. Table 1 lists the categories of inappropriate admission, the most important being the potential for outpatient management.

There was difficulty in tracing certain doctors, particularly locums and doctors working for out-of-hours cooperatives. For the 88 patients, 55 questionnaires were returned. Of these, 33 (60%) specified one or more possible alternatives to admissions; in only 22 cases did referring doctors feel that admission was unavoidable. Responses to the question of preferred or possible options were often ambiguous, being written across two columns on the form. Where this uncertainty existed, responses were viewed as possible rather than preferred alternatives. Preferences for general practitioner versus consultant community hospital beds were almost evenly split (45:55).

Of the 88 patients, 30 (34%) were too ill or too confused to answer, or replied 'don't know'. Only 17 of the 58 respondents felt that hospital was best, 41 (70%)

specifying preferred options. Patients' and referrers' preferred options are detailed in Table 2. An attempt was made at determining the level of agreement between them. Unfortunately, because of the number of non-responders in both groups, there were only 41 pairs for examination. The views on options for care were concordant in 30 (73%).

**DISCUSSION**

The main obstacle to integration of these results is the missing information—the case notes that could not be retrieved, and the low response rates to the questionnaires. The patients with missing notes are likely to have been sicker than average, their notes being despatched to various departments. Their exclusion will thus inflate the rate of inappropriate admission and influence the results from patients and referring doctors.

Almost two-thirds of referring doctors responded. What of those who did not respond? It may be that aggrieved doctors who feel a service is missing or deficient are more likely to speak out. Some may take offence at their judgment apparently being questioned—perhaps more so if the need for admission was obvious. Busier doctors, such as general practitioners with large list sizes in socioeconomically deprived areas, may be less likely to respond because they are too short of time—a factor that may also influence their referral behaviour. Also, difficulty was often encountered in tracing locum doctors and out-of-hours cooperative doctors—other groups whose referral habits may well be distinct. With regard to patient responses, the group of 30 patients who did not or could not respond obviously included the sickest individuals. It also, however, included patients admitted with severe dementia where an acute medical ward was clearly unsuitable. If we assume that *all* the excluded responses would have favoured hospital care, 43% of doctors and 40% of patients would still have considered alternatives.

The high rate of so-called inappropriate admission in this study may reflect the fact that override was applied by someone other than a consultant. Consultants tend to be conservative in assessing patients' treatability outside hospital<sup>3</sup>. Answers may also have been influenced by awareness that the researcher was a general practitioner, by the existence of five community hospitals in Shropshire and by the desire of patients not to trouble a hospital service perceived to be under pressure.

Even so, it is noteworthy that whilst the AEP deemed 28% of admissions to be inappropriate, *at least* 32% of referring doctors and 40% of patients were willing to consider alternatives to admission. When comparisons are made between the causes of inappropriate admissions as assessed objectively by the AEP and the alternatives to acute

Table 1 Reason for inappropriate admission according to Appropriateness Evaluation Protocol

Reason	No. of admissions	%
Treatment or tests could be as outpatient	16	64
Difficulty scheduling test	2	8
Patient needs lower level institution	7	28

Table 2 Referrers' and patients' responses to alternatives to acute admission (more than one option permitted)

Option	Referrers' views			Patients' views	
	Preferred	Possible	Total (%)	Preferred	Total (%)
Community hospital (GP consultant bed)	4	9	23.5	22	38.0
Nursing home	1	1	3.6	10	17.0
EMI nursing home	0	1	2	0	0
Residential home	0	0	0	2	3.5
Hospice	0	0	0	0	0
Same-day outpatient assessment	3	16	34.5	27	46.0
Next-day outpatient assessment	0	3	5.5	12	20.5
Access to urgent investigations	2	6	14.5	8	14.0
Consultant home visit within 48 h	0	1	2	13	22.5
Intensive home support within 2 hours	0	0	0	4	7.0
Intensive home support within 12 h	0	0	0	2	3.5
Less intensive home support within 12 h	0	0	0	2	3.5
Minor home support within 12 h	0	0	0	2	3.5
Other	0	0	2.0	3	5.0
No alternative			38.0	17	30.0

EMI=elderly medically infirm

care specified by referring doctor and patient, the similarities are striking. In particular the AEP suggests that provision of outpatient-type assessments and/or treatment could save the bulk of inappropriate days of acute care. Referring doctors and patients both expressed a desire to access same-day medical assessment without admission. Neither patients nor doctors indicated a perceived need for increased home care. Patients were less impatient than their doctors to access assessment, more being prepared to wait until the next day. Patients and referrers both expressed a desire for access to community hospital beds (access is restricted within the locality) and some patients would have preferred a short-term nursing home admission.

There was reasonable agreement between referrer and patient regarding the need for admission, for the 41 patients where both responded, but 36 hours' hindsight may alter a patient's perspective. Answers would ideally be sought from patients at home or in casualty, before admission decisions were made, rather than from the relative security of a hospital bed.

Much attention is currently focused on alternatives to acute care. Evidence suggests many of these can improve

patient satisfaction<sup>1,6</sup>, can reduce risk of infection and medical accident<sup>7</sup> and are safe (although probably not cheaper<sup>10</sup>). It is encouraging that patients and referrers seem willing to consider alternatives in a substantial proportion of cases.

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