A waiting list to go home: an analysis of delayed discharges from surgical beds

RT BENSON, JC DREW, RB GALLAND

Department of Surgery, Royal Berkshire Hospital, Reading, UK

ABSTRACT

INTRODUCTION The aim of this paper was to analyse patients who were unable to be discharged from a surgical ward despite being surgically fit to leave.

PATIENTS AND METHODS Data were collected on all surgical in-patients on a single day. Patients who were surgically fit for discharge but whose discharge was delayed were identified. Demographic data and reasons for delay were noted.

RESULTS Nine of 75 patients (12%) were surgical bed blockers. These patients were more likely to have been admitted as emergencies ($P = 0.035$) and were older ($P < 0.01$) than the remaining patients. They occupied 35% of the total 'bed-days' of the group as a whole with a median in-patient stay of 41 days compared with 2 days for the other patients. Trust-collected data, based on UK Government guidelines, showed only one surgical delayed discharge patient on the day studied.

CONCLUSIONS Due to problems in defining delayed discharge Government figures probably underestimate the true numbers. Lack of intermediate care and social service provision are a major cause of bed blocking.

KEYWORDS

Delayed discharge – Bed blockers

CORRESPONDENCE TO

RB Galland, Consultant Surgeon, Department of Vascular Surgery, Royal Berkshire Hospital, London Road, Reading RG1 5AN, UK
T: +44 (0)118 987 7419; F: +44 (0)118 987 7881; E: Robert.Galland@rbbh-tr.nhs.uk

Increased numbers of day-case procedures and a general decrease in length-of-stay following most general surgical procedures have resulted in a significant fall in hospital length-of-stay of surgical patients. The number of available hospital beds per head of population is falling.¹ Bed occupancy is, therefore, rising. Rates greater than 85% lead to problems in dealing with both elective and emergency admissions.¹

Approximately 40% of patients aged more than 65 years are discharged to intermediate care rather than home in the US compared with 10% in the UK.² This lack of nursing home, residential home or hospice beds in the UK results in longer hospital stay in acute hospitals, in effect 'blocking beds'. In addition, there is less use of private nursing home beds than would be expected.³

We have seen, in our department, increased numbers of emergency surgical admissions in patients aged more than 80 years.⁴ In an analysis of the surgical waiting list, we identified that there was a 'waiting list' of patients waiting to leave hospital.⁵

The *Community Care (Delayed Discharges) Act, 2003* states that a patient is ready for transfer or discharge if a

clinical decision has been made that the patient is ready, discharge is safe and that it is agreed by a multidisciplinary team decision. It would be more useful, providing an indication of how many surgical beds are being blocked so reducing further surgical admissions, to define how many patients remain in surgical beds when the original surgical condition for admission has been adequately dealt with.

The aim of this paper is to analyse those patients who were unable to be discharged from a surgical ward despite being surgically fit to leave.

Patients and Methods

The Department of General Surgery in Reading is now on one site at the Royal Berkshire Hospital. The surgical department at the Battle Hospital was closed in May 1995. The catchment population is approximately 480,000. Since 1990, there has been an increase in consultants from 5 to 10. During this time, the number of available surgical beds has steadily fallen. In 1985, 143 beds were available compared with 77 in 1998.⁵ There are presently 72 in-patient beds. Some 28 day-case beds are available to be

allocated on a 'first come first served' basis between general surgery, urology and orthopaedics. In addition, 12 day-case beds are available at Newbury District Hospital.

Details of all adult surgical in-patients on one weekday in December 2003 were collected. Once identified, the total length of time from admission to discharge that each patient spent in hospital was documented. Patients who were assessed as being surgically fit for discharge by specialist registrar or consultant, but unable to go home for other reasons, were compared with the remaining patients. Data were also compared with those collected by the trust according to UK Government guidelines.

Statistical analysis was by Mann Whitney U-test or Fisher's exact test, as appropriate. Statistical significance was taken at $P < 0.05$.

Results

On the day in question, there were 75 surgical in-patients (45 women). Of these, 9 (6 women), 12%, fell into the category of delayed discharge. In 8 cases, the reason for delayed discharge was a wait for rehabilitation or a nursing home bed. The other patient was awaiting investigation for a non-surgical condition. This investigation had been delayed, but only resulted in a 24-h delay in discharge.

The total bed occupancy of the 75 patients was 509 days. The 9 'delayed discharge' patients occupied 179 days (35%). The median time which these 9 patients spent in hospital was 41 days (range, 3–58 days) compared with a median of 2 days (range, 1–74 days) for the remainder.

Delayed discharge patients were more likely to have been admitted as an emergency than the remaining patients (8 of 9 compared with 33 of 66; $P = 0.035$) and were older (median 75 years versus 61.5 years; $P < 0.01$). Median number of co-morbidities for the delayed discharge group was two. Five of the nine patients had vascular pathology (all with ischaemic legs). The remaining four had colorectal disease.

Trust-collected data showed only one bed blocker for that day. For the whole of the calendar year, there were only 30 recorded surgical bed blockers.

Discussion

Delays in investigation, treatment and discharge of surgical patients results in an inefficient use of surgical beds. In a 6-month study of general surgical emergency admissions, Fotheringham *et al.*⁶ found that there was a delay in management of 41% of patients studied. Patients awaiting investigation (radiology or endoscopy) accounted for just over half of these delays; 13% of delays were due to a patient waiting for an operation. In addition, 30% of discharge delays were due to a wait for social services

assessment. Similar results were found by Schwanhaeser *et al.*⁷ who analysed 227 general surgical patients. Delays were experienced in 59% of patients from the time of their admission. The commonest cause for delay was, again, waiting for investigations and social service assessment. They calculated that these patients accounted for 346 wasted days. Approximately 100 of those days were accounted for by waiting for medical referrals.

In this study, we specifically looked at delay in discharge once all surgical treatment had been satisfactorily completed. Although 'bed blockers' only accounted for 12% of patients on the day which was analysed, they accounted for 35% of total days occupied by the 75 patients throughout the course of their hospital stay. As in other studies, we found that patients who were 'bed blockers' were older and more likely to have admitted as an emergency.^{6,7}

Five of the nine patients with delayed discharge had arterial pathology. We have previously found that vascular patients use a disproportionate amount of resources in terms of theatre time and hospital stay.⁸ The present study confirms that they also present problems in terms of discharge home.

These results in general surgery are repeated in other surgical specialties. Mohammed *et al.*⁹ studied a 3-month period on an orthopaedic unit. They found that of 621 patients admitted, 46 (7%) had a delay in discharge from hospital. The main reason for this was a wait for rehabilitation either in a young disabled unit or on a care of the elderly ward.

These results are mirrored in non-surgical departments and in countries other than UK. Armstrong *et al.*¹⁰ assessed how many acute medical beds were blocked. About half of the patients in their study fell into this category. Some 29% of total, non-acute bed-days occupied were due to a wait for rehabilitation. Similarly, 28% of acute geriatric admissions in a hospital in Singapore were subjected to delayed discharge.¹¹ Not surprisingly, elderly patients are more likely to fall into this category. A survey of two district general hospitals in the London area showed that 24% of patients older than 65 years were 'inappropriately located'.¹²

Bed blocking has been described as being 'a litmus test for how the whole health and social care system is working'.³ Interviews of senior managers of 35 health trusts in Scotland, looking at all in-patients (not only surgical), identified a total of 1845 bed-blocking patients.¹³ In 1406 of these, it was felt that social services were responsible for the delay – 600 patients were awaiting comprehensive social service assessment.

Most reports highlight the lack of intermediate care as being a major cause of delayed discharge. This is beginning to have a significant impact, resulting in a waiting list to go home. It is clear that UK Government figures provide an underestimate of the number of patients experiencing

delayed discharge from hospital. For the whole of 2003, only 30 recorded surgical bed blockers were officially noted in our hospital. This compares with nine that we identified on a single day and compares with only one officially recorded delayed discharge patient. Vetter¹⁴ emphasised the difficulties in assessing numbers of patients having delayed discharge with lack of definition, poor measurement tools and poor evidence. Urgent clarification of definitions is needed so that accurate and reproducible figures can be obtained. The problem can then be properly addressed.

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