A pre-discharge ward for acute medical patients

ABSTRACT – We describe and evaluate a ward developed to facilitate the discharge planning of general medical patients.

■ Description: A 15-bed pre-discharge ward (PDW) with a ward coordinator was established in 1995, as a counterpoise to a medical assessment unit (MAU).

■ Method: Data, analysed after the first year, included diagnosis, physiotherapy and occupational therapy referrals, length of stay and discharge destination.

■ Results: During its first year, 810 patients were admitted to the PDW; 39% were male, their mean age was 75 years (range, 16–99; standard deviation, 11.3). Respiratory illness (24%) was the commonest diagnosis, 62% required physiotherapy, 51% occupational therapy and 35% needed increased social support. Discharge was as follows: 681 (84.1%) patients were discharged to their admission address, 34 (4.2%) were taken over by the department for care of the elderly, 29 (3.6%) discharged to relatives, 23 (2.8%) to residential or nursing homes, 22 (2.7%) returned to acute medical beds, 12 (1.5%) to general practitioner beds and nine patients (1.1%) died. The average length of stay during a three-month period (October–December) for all acute medical patients was 7.47 days before the MAU and PDW were opened and 7.32 days afterwards.

■ Conclusion: The PDW provides multidisciplinary assessment and focused discharge planning for patients of general physicians. This did not prolong their stay in acute medical beds.

An ageing population, changing perception of the hospital role and decreasing numbers of hospital beds all contribute to a growing problem in the provision of acute medical care. Increasing numbers of emergency admissions, an inflexible contracting process which leads to underfunding, and the challenges of meeting the junior doctors’ contracts add to this problem.

The loss of hospital beds over recent years, although insidious, is remarkable. In our hospital the number of beds has fallen from 731 beds in 1984 to 626 in 1996.

Our district general hospital (DGH) is based on three sites:

• The Princess of Wales Hospital has 122 acute medical beds with six general physicians (two with responsibility for the elderly) and services for obstetrics and gynaecology, paediatrics, surgery and psychiatry. All acute medical patients, regardless of age, are admitted to this hospital and remain under the care of the admitting physician.

• At the Bridgend DGH there are 56 elderly rehabilitation beds under the care of two consultants with an interest in the elderly, as well as beds for the specialties of ear, nose and throat, ophthalmology, rheumatology, dermatology and palliative care.

• At Maes-Gwyn Hospital, there are a further 46 beds, also for elderly care and used for slow stream rehabilitation and respite care.

Once acute medical problems have been treated, referral for rehabilitation is made to the consultants with responsibility for the elderly, based on the needs of the patient as assessed by the admitting consultant.

The number of emergency admissions in the months of January to April 1997 was 197 higher than in the same months in 1996, and this rate has continued.

In general, attempts to cope with these problems rely on maximising the use of available services by reducing the length of patients’ stay in hospital. This represents a major threat to the safe discharge of frail, mostly elderly, patients recovering from acute illness.

In this paper we report the organisation and evaluation of a ward specially designed to focus on good discharge practice for mobile, but frail, elderly patients under the care of general physicians but whose discharge is complicated by social and chronic medical problems. These patients fall between those with a ‘pure’ medical problem for whom discharge home is uncomplicated and those who are left with significant residual disability following their acute illness and are referred to specialist rehabilitation services.

Targeting resources and good multidisciplinary practice on this intermediate group of patients presents an opportunity for improving the quality of discharge and reducing the number of patients so inappropriately labelled as ‘bed blockers’ on acute medical wards. We believe that this can be most successfully achieved though the introduction of a special ward – hence the pre-discharge ward (PDW).

The pre-discharge ward

In 1995, in response to rising numbers of medical admissions and frequent closures of the hospital to new admissions, a medical assessment unit (MAU) was established from within the general medical bed complement. It was felt that increasing the throughput of patients while reducing the number of available general medical beds posed a threat to the process of discharge – particularly for the frail elderly. A 15-bed PDW was therefore created from resources allocated to the elderly.

We concentrated on frail elderly patients who remain under the care of general physicians. Medical, nursing and paramedical staff on the general wards are encouraged to
identify potential referrals to the PDW soon after admission. Such patients remain under the care of the admitting medical team but benefit from a 'geriatric' multidisciplinary approach to their care.

The development has occurred with a minimal increase in resources. Staff comprise the original rehabilitation staff who also cover a 15-bed rehabilitation unit for the elderly (one senior house officer, three qualified nurses and four nursing auxiliaries, one physiotherapist and one occupational therapist with assistants).

The PDW has an additional funded post – that of discharge coordinator. She ensures that discharge practice conforms to good 'geriatric' principles, irrespective of the 'parent' general physician, makes sure the discharge package is implemented, and communicates with relatives, medical, nursing staff, social services and others involved in the discharge process – thus relieving other staff of this time-consuming part of the discharge process.

Maximising throughput is essential to success. We select for the PDW patients whose discharge can be finalised within eight days. It is accepted that some patients may develop problems and have to stay in hospital a few more days. At this stage ward protocols encourage assessment by a liaison nurse who will decide whether to keep the patient on the PDW or transfer to a rehabilitation ward. If discharge is possible within a few days, patients will be kept on the PDW. If the assessment predicts a longer period of rehabilitation, there is a nurse-led fast-track to the rehabilitation ward for the elderly. Patients who develop new or worsening medical conditions and are likely to stay longer are returned to the acute medical wards.

**Method**

Admission diagnosis, multidisciplinary requirements, discharge destination and length of stay of all patients admitted to the PDW were recorded.

**Results**

**Profile of admissions**

In the first year 810 patients (316 men (39%)) were admitted to the PDW, 801 (11.5% of the acute medical intake) from medical beds, four from surgical wards and five from the local tertiary referral centre (two with pacemakers, one after coronary artery bypass surgery, one with a thoracotomy and one following craniotomy for a cerebral tumour). The average age was 75 years (range, 16–99 years; standard deviation (SD) 11.3 years).

Table 1 shows the diagnosis on admission of patients subsequently transferred to the PDW.

**Multidisciplinary needs identified in patients referred to the pre-discharge ward**

Physiotherapy and occupational therapy were required for 503 (62%) and 411 (51%) of patients, respectively, and 280 (35%) were referred to a liaison nurse for further assessment. Most of the 115 patients (14%) admitted to the PDW for a simple medical reason were for stabilisation of warfarin therapy and needed little or no social support or rehabilitation.

**Length of stay in the pre-discharge and acute medical wards**

The average length of stay for all acute medical admissions in the first year after opening the MAU and PDW was 5.6 days; for those discharged directly from the acute medical ward the average was 4.7 days, while those subse-

| Diagnosis                                      | Patients |
|-----------------------------------------------|----------|
| Chronic obstructive airway disease/            | 199      |
| chest infection                               | 24.6     |
| Chest pain (no myocardial infarction)         | 88       |
| Cerebrovascular accident/significant ischaemic| 75       |
| attack                                        | 9.2      |
| Deep vein thrombosis/pulmonary embolism       | 60       |
| Heart failure                                 | 59       |
| Collapse/fall                                 | 56       |
| Diarrhoea/vomiting                            | 31       |
| *Other                                         | 242      |
| Total                                         | 810      |

* There were 59 other diagnoses.

| Year | 1-7  | >7   | Total  | 1-7 | >7   | Total  | 1-7 | >7   | Total  |
|------|------|------|--------|-----|------|--------|-----|------|--------|
| 1994 | 3,948| 9,107| 13,055 | 1,184| 564  | 1,748  | 3.33| 16.15| 7.47   |
| 1995 | 5,150| 11,702| 16,852 | 1,567| 736  | 2,303  | 3.29| 15.90| 7.32   |
| 1996 | 5,785| 12,129| 17,914 | 1,685| 788  | 2,473  | 3.43| 15.39| 7.24   |

Table 1. Diagnosis in patients admitted to the pre-discharge ward.

Table 2. Comparison of occupied bed-days, consultant episodes and average length of stay for all medical patients (includes acute medical, rehabilitation and pre-discharge patients) in the three-month period October to December in the three years 1994 to 1996.
Quently referred to the PDW spent a total of 7.8 days in an acute medical bed. The average length of stay for the 810 admissions on the PDW was 6.2 days (SD, 4 days). This amounts to 4,974 patient-days in the first year of use.

Table 2 shows the bed occupancy, consultant episodes and average length of stay for equivalent three-month periods (October to December) from 1994 to 1996.

Final destination on discharge from the pre-discharge ward

The final destinations of the 810 patients admitted to the PDW are shown in Table 3. All but 129 (16%) were discharged to the ‘home’ of origin. Two of the nine deaths on the PDW were cardiac arrests in patients known to have ischaemic heart disease, two patients died of complications of myocardial infarction (MI) and one of a stroke. Death in the other four was more predictable: two had known malignancy, but were deemed suitable for home discharge with appropriate discharge planning, and two elderly frail patients with significant underlying disease died of pneumonia.

Discussion

Good discharge planning is a major challenge. The concept of wards designed for special purposes is well established (eg stroke units), and this may well also be true for discharge planning. As far as we are aware, this is the first description of a ward dedicated to the discharge planning of acute medical patients who are frail and elderly but remain under the care of general physicians.

Discharge as an aspect of good clinical practice has a low profile in the training of doctors. A recent report by the Royal College of Physicians relating to consultant responsibilities in the provision of acute medical care gives little recognition to the process around discharge. This is in spite of evidence to show that early planning increases the likelihood of a successful discharge and reduces the risk of readmission, and that in some groups of patients poor ‘readiness-for-discharge’ correlates with an increased risk of readmission.

The aim of the PDW is to identify the needs of the relatively mobile, frail elderly patients who in most hospitals would remain under the care of general physicians on acute medical wards. In our hospital, they amount to 11.5% of acute medical admissions. Experience, supported by literature, suggests that, within the stresses of the acute medical arena, discharge planning often takes second place, with 40% of patient discharge plans not implemented fully following discharge. This leads to lengthening stay and ‘bed blocking’.

Our admission protocols resulted in the referral of 810 patients to the PDW. The subsequent high rate of referral for physiotherapy and occupational therapy shows that this is an additional population for rehabilitation. The level of dependency is also reflected in the mortality rate of 1.1%.

Table 3. Destination on discharge from the pre-discharge ward (total number of patients: 810).

| Discharge destination                              | Patients |
|---------------------------------------------------|----------|
| 'Home' of origin                                  | 681      | 84.1 |
| Elderly care services for further rehabilitation  | 34       | 4.2  |
| Home of a relative                                | 29       | 3.6  |
| Residential/nursing home                         | 23       | 2.8  |
| Returned to acute medical care                    | 22       | 2.7  |
| GP bed in community hospital                      | 12       | 1.5  |
| Died                                              | 9        | 1.1  |
| Total                                             | 810      | 100  |

GP = general practitioner

The diagnostic profile of the 810 patients was diverse. It is interesting to note the large number of patients with chest pain in whom an MI was not confirmed. This reflects the change in the community assessment of acute chest pain and the efficient paramedical ambulance service which results in admission of all such patients. The assessment of frail elderly patients with ‘benign’ chest pain inevitably unmasks social and other medical needs, and the exercise becomes much more than simply excluding an MI.

The length of stay for medical patients in the hospital has continued to decrease with the opening of the MAU and PDW. There was a reclassification of beds within the trust in 1995. The patients defined in this study, the majority of whom would have been acute medical patients until the opening of the PDW, have not been defined separately since this reclassification. This has prevented a direct comparison of the length of stay on separate wards, and therefore of separate groups of patients, before and after the opening of the MAU and PDW. We have therefore had to look at consultant episodes to make any comparison in length of stay, as shown in Table 2. The average length of stay for pre-discharge patients on the acute medical wards was 7.8 days. An arbitrary length of stay has been applied to the figures in Table 2 (1–7 days and >7 days) to try to differentiate between longer and shorter staying patients. This will not, however, accurately separate acute medical from PDW and rehabilitation patients because of the overlap in lengths of stay.

Conclusion

The concept of the PDW described in this paper accepts that the environment of an acute medical ward can result in inappropriate discharge of a category of patients. We have assumed that the patients at particular risk are those who are elderly and frail, but remain mobile and are not considered as appropriate referrals to more specialised rehabilitation services. These patients remain under the care of general physicians. About 11.5% of acute medical admissions fall into this category.
The process around the PDW ensures that patients who remain under the care of general physicians have the benefit of the philosophy and practice of a holistic multidisciplinary approach that has evolved as the hallmark of geriatric medicine. This principle of surrogate practice has been achieved through nurse-managed referral and has avoided the cumbersome system of interconsultant referral. Specialist wards have evolved in response to changing need. Our experience suggests that a specialist PDW facilitates quality without prejudicing length of stay. The rationale of the concept is reinforced by the demographic changes which will continue into the next century.

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