

How we do it here...

Providing Better Care for Patients with Complex Needs in Acute Medicine

AG Crosswaite, H Dougall, I Duguid, N Mearns, M Jones & D Bell

Abstract

Patients with complex needs are commonly admitted on the acute medical take and comprise a significant proportion of the workload for an acute physician. An innovative multi-professional approach to the assessment of this group of patients has been developed in Edinburgh; this paper summarises the results of a 4 week review of data collected on patients assessed by the multiprofessional team on the Medical Assessment Unit at Edinburgh Royal Infirmary.

Introduction

The progressive rise in acute medical admissions has led to a review of the process of care and the need for patient focused, innovative developments.

Current evidence shows that the greatest increase in admissions and readmissions is amongst older patients. This patient group often presents with complex needs as a result of multi system chronic disease and patients are often frail, both physically and cognitively.¹ Admission to the acute secondary care setting often results from diagnostic doubt and concern regarding the patient's level of dependency. Although the patients may be suffering from a relatively minor illness, they frequently have loss of function associated with normal daily activities.

A multi professional team is able to address these problems both promptly and accurately.⁵

The role of the combined (medical and surgical) assessment unit based at the Royal Infirmary of Edinburgh is to provide a high quality service for all patients presenting with medical and surgical emergencies. It operates 24 hours per day seven days per week. Systems are in place to provide rapid assessment, diagnosis, stabilisation, observation and early treatment. This is dictated by clinical need and is not time limited.

The assessment unit receives approximately 22,000 admissions per annum of whom 40% are over 65 years of age. Many of these patients have complex needs and require multi-professional input for safe and effective care.

We recognised the increasing need to focus on patients with complex needs and developed a dedicated multi professional team to provide high quality care.

The team provides a service predominantly for the older group of patients but is based on patients needs and is not age limited. The aim is to provide 'point of entry', multi professional assessment and treatment' to maintain independence and prevent deterioration in a patient's level of function.

The team has evolved over the last 10 years and includes dedicated therapy specialists and primary care physicians working closely with medical, nursing and pharmacy staff as an integral part of the Combined Assessment Unit, linking closely with Accident and Emergency and in-patient specialties.

The primary care physician post is complimentary to the consultant physician input in the combined assessment unit but focuses on the management of those patients with complex needs. This focus aims to achieve a holistic medical assessment including, importantly, a prompt functional assessment of the patient. This requires close working with the multi professional team and effective communication with primary care.

The team currently manages over 2500 patients per annum. The aim of this prospective study was to assess the roles and levels of intervention required, and to identify outcomes, in terms of placement and rates of readmission.

Methods

Prospective data on 133 patients were collected by all members of the multi professional team over 28 days. The weekend data collection was more limited due to the reduced working hours of the physiotherapy and occupational therapy staff. Data collected included date of birth, length of stay in unit, source of referral to hospital, area of referral, and type of accommodation. Admission diagnoses were recorded, along with primary discharge diagnosis.

Members of the team involved directly in the patient's care recorded the nature of any intervention for each patient. Discharge and transfer details were documented, together with significant changes to home services for those discharged directly home. Readmission details were also recorded with more detailed analysis of the problems suffered by individuals who were readmitted.

A.G. Crosswaite

Primary Care Physician
Morningside Medical
Practice
2 Morningside Place
EH10 5ER
Email: Alastair.Crosswaite@
luht.scot.nhs.uk

H Dougall

Primary Care Physician,
Royal Infirmary of
Edinburgh

I Duguid

Clinical Specialist
Physiotherapist, Royal
Infirmary of Edinburgh

N Mearns

Clinical Specialist
Occupational Therapist,
Royal Infirmary of
Edinburgh

M Jones

Clinical Lead Acute
Medicine, Royal Infirmary
of Edinburgh

D Bell

Professor of Acute
Medicine, Imperial College,
Chelsea and Westminster
Campus, London, SW10
9NH

Correspondence:

A.G. Crosswaite

Primary Care Physician
Morningside Medical
Practice
2 Morningside Place
EH10 5ER
Email: Alastair.Crosswaite@
luht.scot.nhs.uk

Providing Better Care for Patients with Complex Needs in Acute Medicine

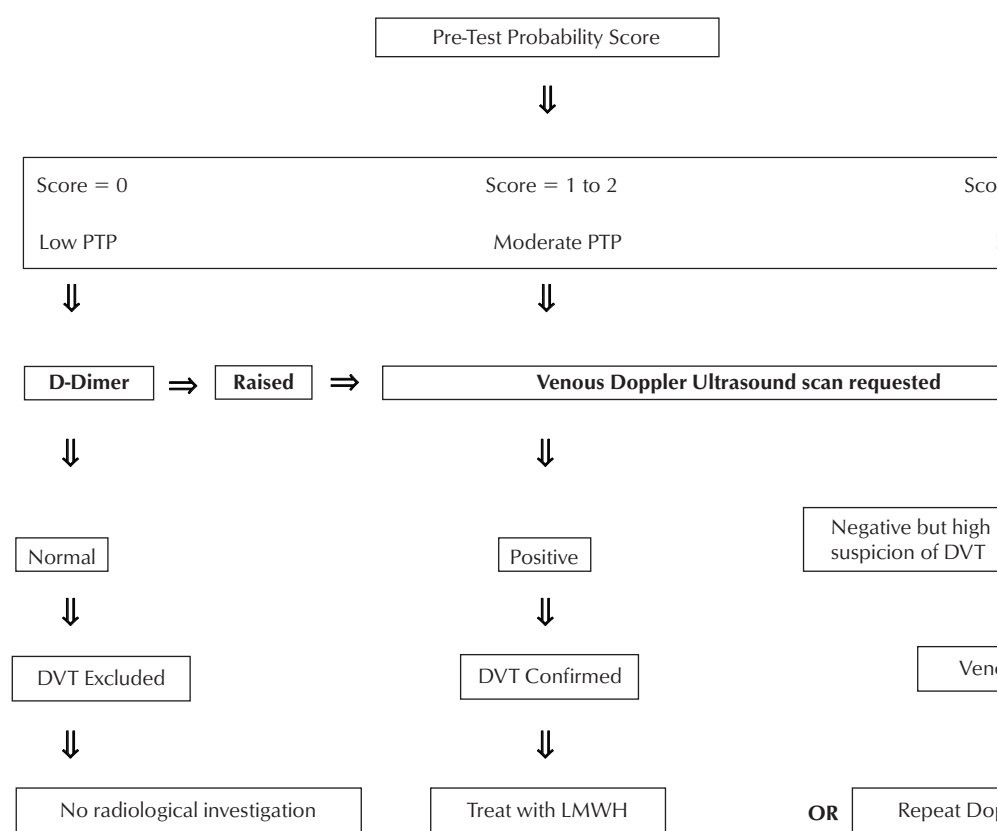


Figure 1. Symptom groups for patients seen by the multiprofessional team.

Results

Data on the primary admitting diagnostic grouping or symptom complex of the patients is shown in (Figure 1).

The patient interaction for the different members of the multiprofessional team varied: the primary care physician reviewed 47%, the physiotherapist reviewed 63% and the occupational therapist reviewed 52%. Not all patients required intervention from all three disciplines for an adequate assessment to be achieved. The majority (67%), however, were seen by all members of the team.

The median time from time of arrival at hospital to being seen by a member of this multiprofessional team was 19 hours (range 0–90.8 hours) with 68% of all patients being seen within 24 hours.

The nature of intervention performed by physiotherapy and occupational therapy are shown in Figure 2. Primary care intervention comprised alterations in clinical management in 83% of patients and direct contact with the patient's General Practitioner in 53%.

The discharge/transfer arrangements are summarized in Figure 3.

The 7 day readmission rate was 4% (3 patients) while 7% were readmitted within 28 days (5 patients). No patients involved in the audit died during the study period.

Discussion

This audit reflects the successful development of a multi professional team approach in acute medicine so that patients with complex needs, are optimally managed.² This patient group comprises a wide variety of diagnoses; however some degree of actual or suspected functional impairment is usually present.³

The multiprofessional approach to this group of patients at the point of entry stems from earlier joint audits of occupational therapy and physiotherapy input in this Medical Assessment Unit. These showed clear benefit in terms of reduced length of stay, facilitating discharge and prompt equipment provision.⁴ This informed the subsequent development of a seven day service.

The ability of the team to provide a holistic assessment of the patient in the context of their acute presentation enables a significant number (53%) to be discharged directly home following a short stay in the combined assessment unit. Some of the key elements of this approach are summarized below.

Speed of Assessment

In order to minimize the duration of a patient's hospital stay, rapid assessment and treatment is essential. In this study period, the majority of patients (68%) were seen by

Providing Better Care for Patients with Complex Needs in Acute Medicine

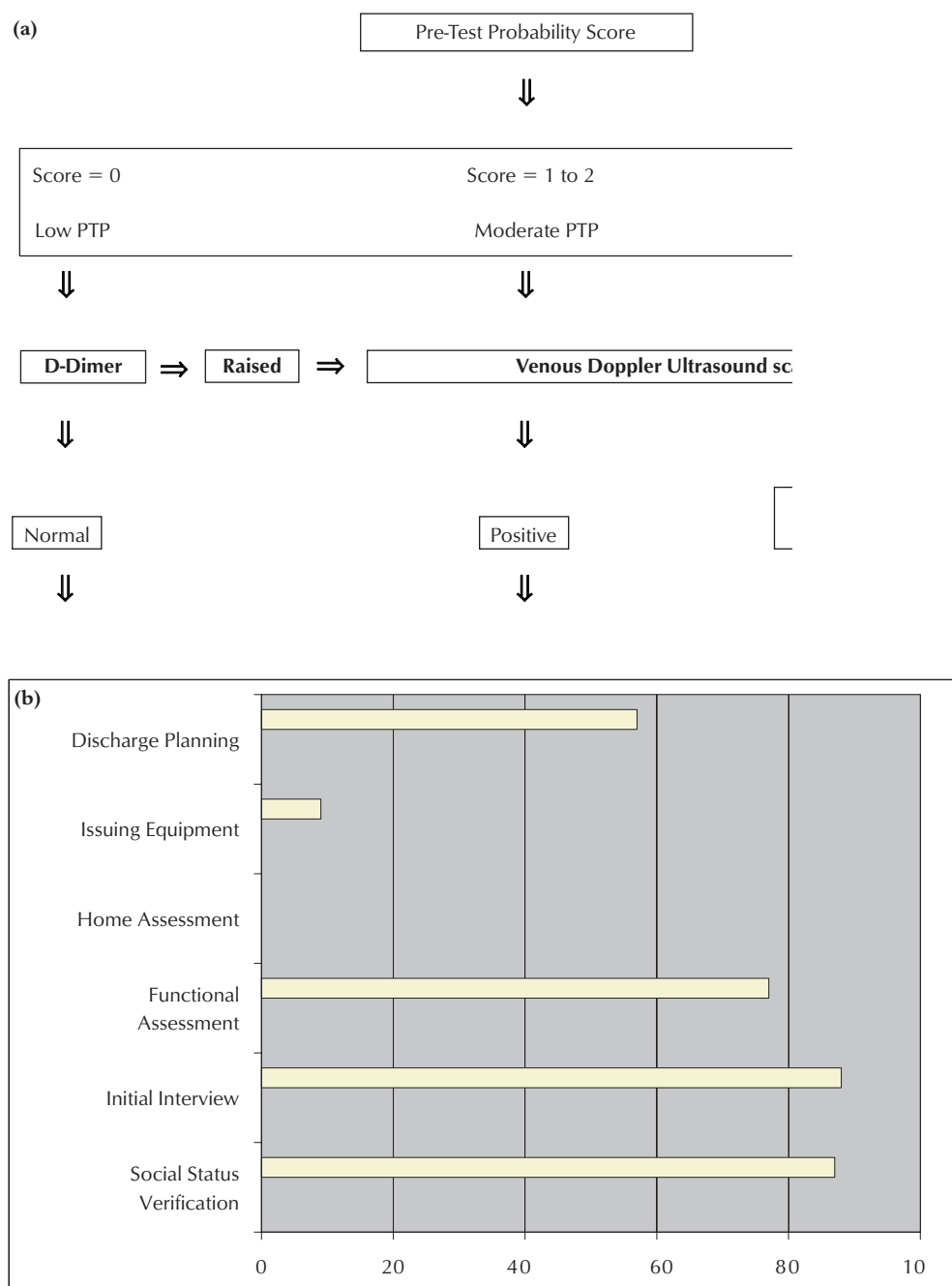


Figure 2. (a) Physiotherapy intervention for patients seen. (b) Occupational therapy intervention.

at least one, if not all members of the team within 24 hours of admission. By commencing this assessment process at the “front door” rather than deferring until transfer to a downstream medical ward the hospital stay of a patient with complex needs can be minimised.

Where delays occurred, this commonly resulted from delayed referral due to the patient’s acute medical needs at the time of admission; delays also occurred for patients admitted at weekends, when the availability of the complex needs service was reduced. Following this audit, the weekend service has been increased with additional hours of physiotherapy and occupational therapy time. In addition the primary care physicians are now able to provide a service on 1 in 4 weekends.

Primary Care Intervention

Following assessment the primary care physician altered the management of 83% of patients and directly contacted the general practitioner in 53% of cases.

One of the central roles of general practice is to manage patients across the primary/secondary care interface. The primary care physician, who combines working in an acute assessment unit with continued activity in primary care, is in an ideal position to design the most effective care plan for an individual patient with complex needs. Creation of such a plan associated with knowledge of local systems within primary and secondary care and taking into account psychosocial issues, facilitates the most effective care for these patients. This needs to be associated with

Providing Better Care for Patients with Complex Needs in Acute Medicine

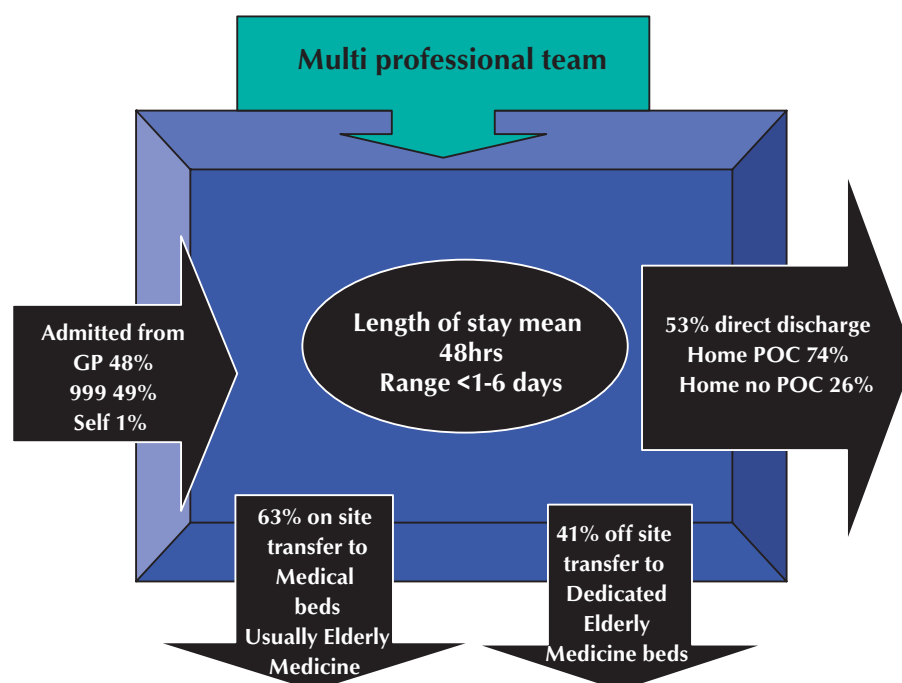


Figure 3. Summary of admission routes, length of stay and discharge outcomes for patients assessed during study period. Abbreviations: POC = package of care

robust communication between health care and social care teams.

This must include the patient's general practitioner with whom the patient may be discussed directly, to create a mutually agreed management plan. We have determined that this form of communication is far more effective than the traditional route using the immediate discharge summary. It is also more consistent than when delegated to more junior members of the hospital medical team.

The identification of patients suitable for transfer to other hospitals is also achieved by the primary care physician, following prompt multi professional assessment. To achieve this, the primary care physician works closely with the bed management team, on and off site. The aim is to transfer medically stable patients to the appropriate beds for their needs, allowing the medical assessment and acute medical wards to function optimally.⁶

Physiotherapy Intervention

Assessment, mobilisation and advice make up the bulk of the workload of the physiotherapist. Intervention for the patients to regain balance and mobility in a short stay setting can lead to safe discharge. A key skill is to identify those who will need longer in-patient stays to achieve this goal, to allow prompt placement in the most appropriate setting for rehabilitation. For the patient who can be discharged from the short stay unit, the prompt provision of the correct walking aid, when required, directly from the store situated in combined assessment facilitates early safe discharge. The physiotherapy input into the safe remobilisation of these patients is a key component of the success of this service.

Occupational Therapy Interventions

Occupational therapy (OT) services provide social status verification, functional assessment, provision of aids and discharge planning that combine to make up the majority of the therapist's workload.

Within these roles, the majority of patients required OT input for discharge planning including the commencement, restoration and augmentation of services available to the patient within the community. In 13% of patients this included the provision of equipment from the combined assessment unit after the patients had been assessed within the on site OT suite.

For social status verification the occupational therapy assistant collected a comprehensive overview of the patient's pre existing services and function. This is achieved through patient interview and with provision of collateral information from the family and members of the primary care team involved.

Reducing Readmissions

The causes of readmission in the frail elderly group have been shown to be multifactorial.⁷ Deterioration due to a continuation or exacerbation of chronic pathology is the most common reason, while care package problems, new medical problems, medication problems and terminal care comprise most of the remainder.

All the readmissions in this study period related to recurrence of medical problems apart from one patient who, on return home, declined the care package arranged. This led directly to re-admission to hospital. The audit revealed no re-admissions due to lack of services and/or equipment.

Providing Better Care for Patients with Complex Needs in Acute Medicine

The five re-admissions during the audit period compares well with previous studies looking at direct elderly discharges from the acute setting.² The causes are representative of this patient group as discussed above. The 28 day re-admission rate of 7% compares favourably with the literature, indicating that up to 20% of this patient group can expect to be readmitted following discharge from the acute setting.⁸⁻¹⁰

References

1. Increasing emergency admissions among older people in Scotland : a whole system account. Steve Kendrick and Margaret Conway. ISD Scotland Whole System Project Working Paper 1. November 2003.
2. National Institutes Of Health Consensus Development Conference Statement. Geriatric Assessment Methods For Clinical Decision-Making. Journal of the American Geriatric Society 1988; **36**: 342.
3. Gideon A, Caplan A, Brown W, *et al.* *Age And Ageing* 1998; **27**: 697–702.
4. Sutton S. *British Journal Of Occupational Therapy* 1998; **61**: 1–6.
5. Lothian Health Older People's Strategy Implementation Group & Lothian Medical Director's Group. Report of Joint Short Life Working Group on Geriatric Medicine, Community Health Services and Social Work in Relation to the Acute Services. Promoting Acuity in Acute Care, Lothian Health 1998.
6. Scottish Intercollegiate Working Party on Acute Medical Admissions and the Future of General Medicine 1998.
7. Khan SA, Millington H, Miskelly FG. *Journal of Accident & Emergency Medicine* 1997; **14**: 151–152.
8. Williams EI, Fitton F. *British Medical Journal* 1988; **297**: 784–7.
9. Rosenfeld T, Fahey P, Price M, *et al.* *Community Health Stud* 1990; **14**: 365–72.
10. Currie CT, Lawson PM, Robertson CE. *Archives of Emergency Medicine* 1984; **1**: 205–213.
11. Denman SJ, Ettinger WH, Zarkin BA, *et al.* *Journal of the American Geriatric Society* 1989; **37**: 937–43.

Conclusion

In the modern NHS the rising demands need to be met by innovative evidence based approaches to the delivery of health care. The development of the multi professional team in the Royal Infirmary of Edinburgh Combined Assessment Unit is one such example. The positive multi professional team approach to resolving diagnostic and dependency issues promotes enablement and independence for the frail elderly.