

# Organisational issues in acute medical care

Zoe Borrill and Brian Harrison

## Scale of the problem

Emergency admissions have risen by 2% per annum from 1994 to 1998<sup>1</sup>. This, coupled with a steady fall in hospital bed numbers<sup>1</sup>, has led many trusts to exceed the critical 85% bed occupancy threshold above which problems occur when handling emergencies<sup>2</sup>. Increasing public expectations, shortage of social support and intermediate care beds, discontinuity of out of hours primary care, inappropriate early discharge, and fear of litigation by doctors may explain the rise, as well as represent challenges for improvement. An additional problem is the reduction in junior doctors' hours which has been implemented without a proportionate increase in the number of doctors.

## Reforming emergency care

It is fairly obvious that emergency care needs to be improved. The Department of Health (DH) has duly responded by appointing a winter and emergency capacity team which has come up with a new model for the organisation of emergency care, called 'Reforming emergency care'. It reiterates the usual mantra of the need for new approaches to:

- cope with the increased demand
- simplify the ever-increasing complexity of acute services
- make the system more patient-centred.

In fact, much of what is contained in the new model is already taking place, but better co-ordination of all these services is needed and better dissemination of good practice.

## Organisation, staffing and training

The Federation of Colleges Report<sup>3</sup> highlighted several areas:

- sessional time for consultants for emergency care
- twice-daily senior ward rounds
- medical assessment units (MAU) with dedicated staff
- seven-day access to investigations and support services
- many physicians to be dual trained.

## Medical assessment units

Radical reorganisation of an MAU and application of some of the changes can provide real benefits. In addition to specialist wards and critical care beds, Simon Walford mentioned two particular innovations in his unit at Wolverhampton:

- 1 Older patients on the MAU are screened by a physiotherapist and occupational therapist to fast track suitable patients to an 'elderly care pathway', avoiding delay and lengthy and complex discharge assessments.
- 2 Appointed general practitioner (GP) specialists in the MAU assess apparently less sick patients who would normally wait the longest to be seen and, where possible, arrange discharge home with the necessary support.

The major benefits of the new system are improved integration and understanding between primary, secondary and social care as well as a more efficient and effective service for the patients and staff. However, despite the investment of an additional 14 assessment areas and 46 general medical beds, the unit is now reaching saturation point due to the ever-increasing workload.

John Heyworth also highlighted the importance of the integration between acute medicine and the emergency department. Emergency medicine has evolved from a trauma-based specialty to one dealing with many acute medical and elderly patients. The emphasis of the emergency department has moved from 'see and refer' to a policy of 'assess, stabilise, observe and then transfer'. Greater integration could involve rotation of staff, common guidelines and protocols and a move towards a more streamlined journey for the patient.

An insight into the interface between primary and secondary care was provided by David Vickery. Although 48% of medical admissions occur out of hours, only 39% of these are directly from GPs. He argued that patients often see hospital referral as a definite benefit and concentrating on reducing demand may not always be in their best interest – echoing comments from David Dawson about the need to avoid the term 'inappropriate referral' or attendee, instead concentrating on providing services to meet the needs of our patients. Ian Harvey had

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*Clin Med JRCPL*  
2002;2:161-4

**This conference was held at the Royal College of Physicians on 3 July 2001**

also noted the twofold variation in emergency admission rates between UK hospitals<sup>4</sup>.

## Medical emergency assistants

Medical emergency assistants (MEA) have greatly helped to relieve the pressure resulting from shorter junior doctors' hours and growing numbers of emergency admissions<sup>5</sup>. They are members of the acute admitting team; they perform clerical duties (eg labelling samples and request forms) and specified procedures (eg vene- and arterial puncture, blood gas analysis, intravenous cannulation, urinary catheterisation and ECGs). MEAs save an average medical time per patient of about 36%. The use of MEAs was thought by 90% of junior doctors to enable them to see more acute medicine, and all wanted the posts to continue. In discussion, concerns were expressed that this approach, although laudable, was only temporarily plugging a hole and would lessen the pressure which needs to be put on the government to increase medical staffing levels and that medical and nursing staff may become de-skilled. It was emphasised that the question of whose job it is to do a particular task is of secondary importance, and that we should be developing competence-based systems without demarcation issues to realise the potential of all staff.

## Size matters

### *Large hospitals*

A discussion of the particular problems and strengths associated with hospitals of different sizes followed, with Brian Harrison

presenting the case from the point of view of a large acute hospital, the Norfolk and Norwich. The general public and government increasingly expect patients to be cared for by a specialist physician and a team expert in their specialty. Studies in medical emergencies (eg asthma<sup>6</sup>, diabetic ketoacidosis<sup>7</sup> and upper gastrointestinal bleeding<sup>8</sup>) have demonstrated the significant benefits of specialist care. Twice-daily triage of patients to specialist teams is practicable in large hospitals<sup>9</sup>. Other processes facilitated in a larger hospital include training, audit, research, team work and evolving consultant careers.

Problems associated with managing the 60–80 acute medical admissions per day in a hospital of the size of the Norwich hospital were also discussed. Manpower issues, particularly after the advent of the new deal, remain a problem but initiatives such as rapid access deep vein thrombosis and chest pain services, together with increased level of senior support, help lessen the pressures.

### *Small hospitals*

Most small hospitals are happy hospitals. In a small hospital with limited consultant numbers, it is essential for everyone to work as a generalist and work frequently on call. The interfaces between disciplines and with primary care are well developed.

Problems associated with small hospitals include:

- the difficulty of working at two-site trusts
- lack of specialty triage
- limited range of specialties on site
- consultants working one in two rotas or single-handedly.

Specific solutions have been devised to address the particular problems of a small hospital. These include:

- consultant review of all patients before 9.30 am to ensure that decisions are made early enough to make the service more efficient
- a multidisciplinary high dependency unit with interdisciplinary participation available at senior level
- good professional relationships
- the use of guidelines and protocols on the acute receiving unit and wards
- audit of near or actual disasters
- facility to transfer patients (mainly for intermittent positive pressure ventilation) to a large hospital 40 miles away
- direct access radiology
- now, or in the near future, telemedicine.

## The impact of medical emergencies on the surgical specialties

Raising public expectations without first providing appropriate resources has led to problems. With every part of the system under such pressure and operating at near capacity, small errors or inappropriate practice lead to large perturbations. Elective in-patient as well as day surgery should be ring-fenced. In-patient medicine is in practice largely an emergency service and needs

## Key Points

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**All who perceive themselves, or are perceived, as needing referral should be streamed**  
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**Medical assessment units (MAU) with protected time and resources and twice-daily senior ward rounds help to improve care and reduce delay**  
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**An MAU team should include a physiotherapist, occupational therapist and social worker. Some sessions should include general practitioners**  
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**Provision of an emergency service integrated with accident and emergency, imaging, laboratories, etc is important**  
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**Medical emergency assistants help to relieve the pressure produced by shorter junior doctors' hours and growing numbers of emergency admissions**  
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**There is a need for system- (eg respiratory) or needs- (eg geriatric) related specialist wards and teams, with early referral, disease management guidelines and protocols**  
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**Links are needed between small and large hospitals**  
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**The importance of collecting high quality data cannot be overemphasised**  
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## Conference programme

### ■ Seamless care, a strategic view

Dr David Dawson, Department of Health

### ■ Background and scale of the problem of acute medical admissions

Professor Ian Harvey, University of East Anglia, Norwich

### The role of medical assessment units (MAUs)

#### ■ Organisation, monitoring and training

Dr Derek Bell, Royal Infirmary, Edinburgh

#### ■ MAU: how far can you go?

Dr Simon Walford, New Cross Hospital, Wolverhampton

#### ■ MAU: A&E interface

Mr John Heyworth, Southampton General Hospital

#### ■ Primary care – acute medical admissions interface

Dr David Vicary, Rural GPs' Practice, Eye, Suffolk

#### ■ Medical emergency assistants

Dr Tony Davison, Southend Hospital NHS Trust

### Size matters

#### ■ Advantages of a large acute general hospital and problems of managing a medical take in a large hospital

Dr Brian Harrison, Norfolk and Norwich University NHS Trust

#### ■ Advantages of a small acute general hospital

Mr Iain Gunn, Dr Gray's Hospital, Elgin

#### ■ Problems of managing a medical take in a small hospital

Dr John Williams, Halton General Hospital, Runcorn

### ■ Impact of acute medical admissions on surgical and other specialties

Mr David Ralphs, Norfolk and Norwich University NHS Trust

### Acute medical admissions – identifying problems

#### ■ Medical issues

Dr Ed Seward, Newham Hospital, London

#### ■ Organisational issues

Dr Emma Greig, Royal London Hospital

#### ■ Problems collecting data

Dr Ruth Harris, Royal Liverpool Hospital

#### ■ Improving quality of care

Dr Sean Preston, Homerton Hospital, London

### Manager's view

#### ■ Provider's perspective

Mr Edward Donald, Royal Free Hospital, London

#### ■ The ideal design of emergency access programmes: acute medical component

Mrs Karen Castille, National Patients' Access Team, Cheshire

### Conclusion

#### ■ Overview and how we handle the data

Dr Mike Pearson, Director, Clinical Effectiveness & Evaluation Unit, Royal College of Physicians

to be resourced as such. Community and peripheral hospitals should be developed to meet present-day challenges. The system urgently needs more resources, but the general public should be made aware of the tension between quality care and local access.

## Medical deaths

Using different methodologies, studies from the USA, Australia and the UK have shown that medical errors do occur. In an audit of 1,014 case notes, Vincent *et al*<sup>10</sup> found that 10.8% were associated with adverse events, half of which were thought to be preventable.

The Royal College of Physicians study examined 200 consecutive deaths of patients admitted to three hospitals as an acute emergency, and who had died within seven days of admission. The five specialist registrars and one consultant completed a structured questionnaire containing quantitative and qualitative data. Details were abstracted from each patient's notes and the doctor made a judgment as to whether the death was expected and whether any management problems had occurred. Assessors judged whether care met a standard that could be defended to an outsider.

The qualitative section was completed by two doctors to examine interobserver variability. As expected, 81% of cases were elderly (>65 years) and most (87%) had associated comorbidity. Interobserver agreement scores were encouraging

and indicated fair to moderate agreement. One or both doctors considered that death was unexpected in 39 cases (19.5%). There was no association between these cases and age, gender, number of comorbidities present, day of the week of admission or how busy the 'take' had been. However, the 39 patients were more likely to have been admitted during the night (37% vs 14%), had lower Apache II scores, better World Health Organization performance scores had longer waits to be seen, had been seen by more junior staff and were more likely to have had a wrong initial diagnosis. In 12.5% of cases, it was felt that the identified problems may have contributed to the death.

Although this was a pilot study of limited size and deliberately hypercritical, the scale of the problems identified and their potentially remedial nature surely require further study. Ways and means were then discussed in a lively debate. A show of hands indicated overwhelming support for developing the project. The results of this pilot study will be published shortly.

## Manager's view

Edward Donald presented further practical examples of how problems can be overcome. He stressed that simple targets such as reducing trolley waits have huge implications and need significant investment. In 2000, the Royal Free achieved a situation in which there were no medical outliers. This required significant reorganisation, as well as 22 new beds, increased

staffing levels and private sector investment. The example set by Wolverhampton was inspirational. Many of their initiatives have been used, including GP involvement and development of a consultant-led MAU. He emphasised the importance of analysing the situation in one's own hospital, consulting with the staff concerned to achieve realistic change, and implementing initiatives which are tailored accordingly.

## National Patients' Access Team

The National Patients' Access Team (NPAT) worked with 16 accident and emergency departments to reduce trolley waits over the winter of 2000/2001. This work used the Pareto 80:20 principle to identify the small number of key changes that would yield greatest effect to reduce waits and improve emergency care. A new NPAT programme, Ideal Design of Emergency Access (IDEA), commenced this year and will redesign patient flows through the emergency system across the health and social care community.

## How should we handle the data?

In closing the conference, Mike Pearson said that data need to be collected to:

- justify some of the innovations highlighted
- assess their outcomes
- demonstrate the transparency and quality of our practice
- determine how closely we approach the 'dream' of the DH.

Data then need channelling in a usable format to enable change. One effective way of data utilisation is to provide trusts with relative performance benchmarks. These are understood by patients, managers and health professionals and provide a comparison, not with unrealistic ideals but against one's peers. We need to move away from the current blame culture. In 1917 Codman said:

*Every hospital should follow every patient it treats long enough to determine whether or not the treatment was successful and to inquire 'if not, why not' with a view to preventing similar failures in future.*

Only when we start to measure our outcomes, can we identify the problems and produce changes for the benefit of our patients.

## Conclusions

In conclusion, the conference enabled the presentation and discussion of current problems in acute medical care. Solutions were discussed, with particular emphasis on:

- appropriate pathways of care for all patients who present as medical emergencies
- improved integration between disciplines
- creation and best use of specialty teams and wards
- use of guidelines, protocols and agreed procedures.

We hope to have disseminated current good practice and

encouraged innovative approaches to these problems.

## Acknowledgement

The authors acknowledge the support provided to them in compiling this report by Professor Carol Black and the conference speakers.

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