

Whole-of-hospital response to admission access block: the need for a clinical revolution

E Haydn Walters and David J Dawson

Acute hospital access block — the inability to admit acutely ill people into a hospital bed in a timely fashion — was the subject of three articles in the 6 April 2009 issue of the *Journal*.¹⁻³ The authors of these articles were emergency department (ED) doctors (Fellows of the Australasian College for Emergency Medicine) who have taken a lead in highlighting the problems of the hospital system and the need for reforms, and are calling for increased inpatient beds. The ED has become the single gateway into hospital, whatever the pre-hospital pathway, and this is reflected in its current functions.¹⁻³

There is little doubt that acute admission bed block is a major problem in Australia, with significant negative clinical effects. Richardson and Mountain suggested, quite correctly in our view, that “ED overcrowding is best seen as a marker of whole-of-hospital dysfunction”³ and referred, as have other authors, to the need for a whole-of-hospital response.³⁻⁵ They listed many potential actions, but their suggested hospital responses are essentially administrative. We contend that this does not go nearly far enough, and that the whole-of-hospital response needs to involve a dramatic change in clinical culture, including the way in which the ED itself operates and is perceived by those working within it, by the rest of the hospital community and even by government.

Fatovich and colleagues alluded briefly to the changes brought about in both EDs and acute hospitals in general by “political will” in the United Kingdom.¹ This refers to the “4-hour rule” introduced in 1999 by central government to limit the time any patient should spend in a National Health Service (NHS) accident and emergency (AE) department. Although there may be some “gaming” around this indicator, resulting in cases of ward “dumping” and poor patient care,⁶ in general it is leading rapidly to positive and revolutionary changes in the way acute hospitals operate.⁷⁻¹³

For the past 6 months, one of us (E H W) has been studying this revolution, and for some time the other (D J D) has been involved as a clinical manager in re-engineering middle-to-large-sized UK district general hospitals, which are the backbone of the NHS acute hospital service. These changes in the NHS have implications for the developments needed urgently in Australia and indeed that are beginning to happen in a number of locations, frequently driven by exasperated ED specialists.

An important factor in the UK experience was the realisation that AE department work patterns were part of acute hospital dysfunction. AE physicians had to take on too much of the acute medical load and investigate and manage too many acutely ill medical patients for too long. The rest of the hospital clinical community responded by disengaging from the urgency of acute admissions. This inevitably bogged down AE doctors so that they became less effective at other core work.¹²

The 4-hour rule led to the need to restructure and modernise the work patterns of inpatient clinicians, particularly physicians, because most acute admissions to the average district general hospital (about 40 per 24 hours) are medical patients. Although media headlines have frequently focused on development of the acute medical assessment and admissions unit (AMAAU),⁷⁻¹¹

ABSTRACT

- The major problem of access block to acute hospital admissions in Australia needs a more radical response than a focus on increasing inpatient beds, as suggested recently.
- Australia needs to take on board recent changes in United Kingdom hospital systems, which have revolutionised patient flow during acute admissions and dramatically improved efficiency, clinical quality and outcomes.
- Accident and emergency departments in the UK became recognised as part of acute hospital dysfunction. Now, increasingly, patients needing admission are directed as soon as possible to an acute medical assessment and admission unit (AMAAU), thus freeing accident and emergency staff for re-defined core priorities.
- AMAAUs require supervision by a new style of acute general physician, who drives timely management of acute medical patients, defines patient needs, estimates the likely date of discharge, and selects the most appropriate inpatient clinical stream.
- These reforms are staff-intensive and expensive, but cost-effective and patient-focused. They highlight the need for an adequate scale for acute clinical services and defined streams of care within individual hospitals, as well as explicit networking at a regional level to guarantee specialist acute services when needed.

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integrated changes are needed at the start, middle and end of the patient's hospital stay — in diagnostic support services, provision of adequate intermediate care (where appropriate), and allied health involvement (especially during rehabilitation).

UK models of AMAAUs vary depending on local circumstances, such as the hospital's state of development and available resources, but an ideal AMAAU works in parallel and in close physical and professional relationship with AE staff, as a third to two-thirds of patients are admitted from the AE department, with most others directly referred by GPs. Usually, admission of patients is organised and triaged by an experienced nurse coordinator. The guiding principle is that, when a medical patient's expected hospital stay is more than 4 hours, the patient should be sent as quickly as possible to the AMAAU, although many hospitals have specific provisions for particular groups, such as those with cardiac chest pain or stroke. To respond to the number of patients and urgency of their needs, the medical and nursing staffing of the AMAAU needs to be adequate both in number and seniority,¹³ and staff rosters need to reflect the largely predictable fluctuations of workload during each 24-hour period.

All this complexity must be quantified, modelled and adapted to meet local needs, and in an auditable, iterative and sustainable way. The number of beds needed in the AMAAU is about 60% of

the average daily admission number, meaning that about 40% of patients must be moved from the unit during their actual admission day (8am to 8am), with most of the remaining patients moved to appropriate wards early the next day. Within the first few hours of admission, each patient requires rapid nursing assessment (and at times brief initial assessment by a senior doctor), medical clerking, and initiation of investigations by junior doctors. Importantly, when all the early data are available, timely senior review of the patient's condition is essential to formulate a provisional diagnosis and management plan, and to designate an inpatient clinical stream (see below), likely length of stay and most appropriate ward destination. AMAAUs require adequate complements of nursing managers and administrative personnel, with effective coordination of all involved.

Designation of a clinical stream for each patient is an attempt to tailor care to specific patient needs and to be as clinically efficient and cost-effective as possible. Patients designated as "short stay" are likely to be discharged within about 24 hours, either from the AMAAU or a separate short-stay area (up to 50% of admissions); those in the "sick general" stream come under the care of a traditional general physician (although role overlap between acute and general physicians may be substantial in some hospitals); those in the "sick specialist" stream require urgent care by an organ specialist; and patients designated "complex elderly" require urgent transfer to a geriatric or rehabilitation ward. Each day, the predicted number of beds required for each stream has to be actively and prospectively made available.

Two complementary acute roles for general physicians have emerged: the acute physician (AP), which is a new concept, and the more conventional role of inpatient general physician. An AP needs to be present in the AMAAU at least between 8am and 10pm and ideally at all times. This results in the appointment of several new APs, who are given flexible, rolling rosters, akin to accepted work patterns of EDs and intensive care units. APs supervise and "drive" the AMAAU to ensure timely, high-quality acute care. The general physician works alongside an AP, especially sharing the morning "post-take" round so that it can occur quickly and efficiently, and takes responsibility for "sick general" patients after transfer from the AMAAU. A given consultant physician may work in an AP or more generalist role, or both, at different times. The AP will need to acquire some acute procedural skills that are more commonly associated with ED specialists.

Many organ specialists and geriatric physicians (the "third tier") may also be on the general medical roster, but some organ specialists, such as cardiologists and gastroenterologists, should be available at all times; they require sufficient staff to allow specialist 24-hour on-call rosters. Staff of third-tier services should also actively seek out AMAAU patients they would be best suited to care for. Nurse specialists can effectively fill such "scouting" and advisory roles. Thus, the ideal acute medical service has both "push" (from AMAAU) and "pull" (from third-tier teams) to enhance patient flow through the system.

The new realities of life for acute medical staff in the NHS are tough, revolutionary and firmly patient-centred, but with a number of consequences that were not necessarily fully foreseen at the start of this evolving process:

- The number, skill mix and seniority of acute clinical staff need to be significantly enhanced.

- Rostering of medical staff at all levels of seniority needs to become highly flexible to meet demand, which may require a substantial culture change for some.
- Although pathology laboratory resources are routinely available at all times in the UK, comprehensive radiology services are not. This is a frequent cause of frustration.
- Smaller district general hospitals, and even some larger hospitals, are unable to adequately cope with the new expectations, and require macrosystem redesign and networking at a regional level. Politicians, who face more demands for local access than for clinical safety and quality care, find these needs hard to support.
- Specific training and re-training in, and professional support for, the new acute sub-branch of general medicine are needed, particularly from the royal medical colleges.
- Up-front investment in AMAAUs is more than recovered by major efficiencies in length of stay, bed utilisation and clinical outcomes. Our personal observations in this area are beginning to be documented.¹⁴⁻¹⁶

Australian hospitals and patients have a great deal to gain by embracing many of these reforms, which have been shown to be effective in the UK.^{9,11,14-17} Unless we make changes not only in the way EDs are run, but in the whole acute medicine process, more and more acute beds will be needed to cope with the number of medical patients and the acute nature of their conditions.¹⁻³ We could achieve a better and more cost-effective outcome with the beds we already have if we truly revolutionised whole-of-hospital acute medicine culture.

Competing interests

David Dawson works for Dearden Consulting, Sheffield, UK, as a consultant in change management. His clientele include UK National Health Service Trusts.

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