Access block can be managed

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Access block — the inability to access appropriate beds in a timely manner for emergency patients who require inpatient admission — is the greatest single impediment to safe and efficient emergency care in Australia and New Zealand.[1-3] Also called "boarding", it is associated with significant increases in emergency department (ED) waiting times, adverse events, deaths, and hospital length of stay.[3] Hospitals cannot function effectively while there is significant access block.[3] ED overcrowding is ubiquitous around Australia and New Zealand and, despite considerable efforts by state and federal governments, has worsened over the past few years.[3]

In this issue of the Journal, the factors that contribute to access block and the problems that result are explored by Richardson and Mountain (*page 369*).[4] The underlying cause is an increase in emergency demand, combined with a decrease in stock of acute hospital beds (Box 1). This has been exacerbated by an ageing community with increased chronic illness, a reduction in residential care options in the community, and increasing expectations of quality of care in community facilities. The significant reduction in after-hours general practitioner services for complex emergencies and house calls[5] has also had an effect. Casemix payments, which provide a funding incentive for hospitals to perform simple elective surgery rather than manage complex medical emergencies, have exacerbated access problems in both public and private hospitals.

Yet, there are solutions to the problem of access block, which must be adopted if Australia and New Zealand are to continue to benefit from having health systems that are among the best in the world. Here, we discuss potential solutions, as well as common proposals that are not supported by the evidence.

Solutions to access block

The approach to reducing emergency and hospital overcrowding has been generally ad hoc and driven by the need for urgent political solutions to local crises. Many of the pilot studies and temporary funding models implemented have had initial success,[6] but their funding has been withdrawn after only a few years. No national initiatives have addressed the situation comprehensively, and systematically implemented the solutions necessary to resolve access block.

EDs are a flexible point in an otherwise inflexible system of health care delivery in hospitals and the community. Recognition of the impact that "boarded" patients have on ED function, and of the need for change, is essential before solutions can be implemented. Sustainable solutions will require national leadership and coordination between state and federal governments, with funding models aligned with the desired outcomes.

The simplest way to classify solutions is to look at ways to reduce the steadily increasing demand for acute hospital services (input), to increase acute hospital capacity (processing capacity), and to improve exit from acute hospitals (reduce obstruction) (Box 2). Ideally, for a hospital to function effectively, occupancy should be no more than 85% to allow for the normal fluctuations in demand.[7]

ABSTRACT

- Hospitals cannot manage their emergency patients when there is significant access block.
- There are solutions that should be implemented but require national leadership to be effective.
- These solutions include an immediate increase in the number of acute hospital beds, improved coordination and increased community capacity to manage medical patients with complex conditions outside acute public hospitals, improved hospital processes, and better standardisation of treatment within emergency departments.
- There is little evidence that telephone triage, ambulatory care clinics or disaster management techniques, including ambulance diversion, reduce access block.

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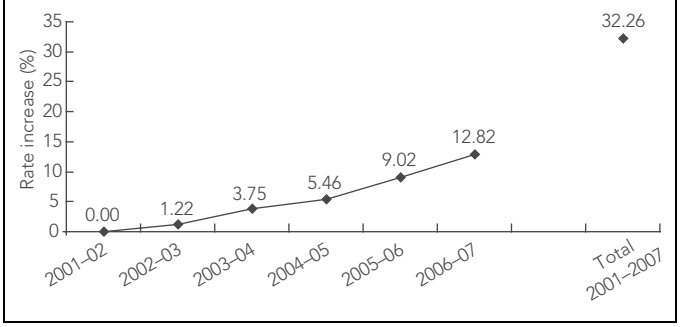
Reducing demand

Out of hospital

The persistent 5%–10% annual increase in emergency demand is unsustainable in the long term. The reason for the inexorable increase is not clear; it is only partly explained by the increasing and ageing population (which would account for 1.5%–2% of demand).[8] Patient expectations are increasing, and medical professionals are continually expanding the treatment options available. Clearly, in a system that is unconstrained by the financial considerations of consumers (ie, it is free), there must be limits to what can be provided.

Managing emergency demand is complicated and highly political. Solutions such as copayments for ED services are appealing, and there is some evidence that payment for services reduces demand slightly. However, there are potential dangers, as patients with serious conditions may be reluctant to attend — resulting in delayed attendances for heart attacks, strokes and other time-critical conditions.[9]

1 Relative increase in overnight acute hospital separations in Australia, 2001–2007



A major component of the increase in demand comprises services provided to older patients.[10] Inappropriately aggressive treatment of patients who are clearly dying, management of palliative-care patients in acute hospitals because of poor end-of-life planning, and lack of planning for treatment failure (especially after hours) in frail medical patients with complex conditions all contribute to this demand. As well as contributing to hospital overcrowding, the failure to address these issues is clearly not in the interests of the patients or their relatives. Attempts to improve the management of this vulnerable group of patients have had mixed success.[3,9]

In Victoria, the Hospital Demand Management Strategy was initiated in 2001 and involved a comprehensive suite of measures aimed primarily at reducing ED attendances across the state, including the provision of alternative services for individuals at risk of emergency admission. This program was initially associated with a plateau in demand, but recently there has been a renewed increase in demand.[8,11] Various states have had success with "frequent attender programs", which identify patients with conditions associated with recurrent admission, such as chronic obstructive airways disease and heart failure, and "case manage" them to reduce admissions. Although successful at a local level, the overall impact has been limited because of the small number of patients and uncoordinated approach. Ideally, a coordinated primary care program could identify high-risk individuals and institute case management with care plans that do not involve acute hospital admission as the first option.

ED presentations for mental health problems have increased significantly as a result of the mainstreaming of mental health care from the early 1990s, associated drug use, and increasing community awareness of mental health issues.[8] Community psychiatric teams, fast-tracking of patients with mental health problems, and improved access to mental health facilities could improve management for this important group of patients.

There have been a number of attempts to limit ambulance transports to hospital, by referring apparently non-urgent calls to phone triage, and also by using paramedic practitioners to treat simple problems at the scene. The latter programs have had limited success, but need further exploration to realise the potential benefits. In addition, GPs could be better utilised to help plan community treatment (as opposed to default ED management) of complex medical conditions in frail and older people.

Many hospitals have introduced varying outreach models of care, including hospital-in-the-home, hospital-in-the-nursing-home, medical assessment teams, and chronic disease management programs. Most have had some success, but their lack of efficiency and funding, and duplication of other community services require review.

Advance care planning for older people is also essential, but most patients in nursing homes and other residential care facilities do not have an explicit care plan.[12] Even when there is a care plan, it is often not followed because of the lack of coordination between treatment agencies, especially after hours.

A fundamental feature shared by all these programs is a lack of sustained funding and of coordination with existing infrastructure.

In the emergency department

The ED has a critical role to play in reducing demand for hospital beds. Availability of senior decision-making capacity 24 hours per day reduces demand for beds and improves patient safety.[13] The provision of short-stay beds for observation over a few hours and more comprehensive testing and consultation further reduces the need for hospital admission.[14] Research to develop safe, accelerated protocols for chest pain, minor head injury, abdominal pain and other common conditions has shown major improvements in safety and speed of decision making.[14,15] Despite this, few standardised approaches to these common clinical conditions have been adopted in Australia. Standardisation of processes has been shown to improve patient safety,[16] and in other industries has improved efficiency and reduced error through techniques such as "lean thinking".[17]

Increasing capacity

In the emergency department

It is essential for EDs to have sufficient capacity to manage patients according to standard protocols. The Australasian College for Emergency Medicine has promulgated standard guidelines for EDs.[18] Expanding ED capacity beyond this will not decrease overcrowding, as it is philosophically similar to building a car park to manage the queue at a fast-food facility.

In the hospital

Increasing physical bed capacity

The most obvious and important solution to solving the crisis is to increase physical bed capacity. Clearly, acute public hospital bed numbers have decreased by 15%–30% over the past two decades (now 2.6 per 1000 population).[3,19] Some of this decrease is appropriate, because of improved treatments for many acute processes (eg, laparoscopic surgery). However, the spectrum of services provided has increased considerably, and many frail patients with complex illnesses are now kept alive because of improved medical treatment (eg, those with malignancy, chronic obstructive airway disease, chronic cardiac failure and renal failure), all requiring increased bed-days.

There are some arguments against a simple increase in bed numbers. Whenever hospitals and jurisdictions have temporarily increased beds, demand has also increased, suggesting "elasticity" in demand. Any increase in capacity must be associated with demand management.

In some cases when jurisdictions have attempted to fund increased beds, staffing restrictions and rigid staffing models have prevented increases in bed numbers despite the available funding. Also, funding has been made available at short notice for short periods, thus making it impossible to "gear up" quickly. It is not only a question of funding — a different staffing model (moving away from nurse ratios and inflexible categorisation of staff) is required, and funding must be sustained. Many nurses are choosing not to work in acute hospitals and aged care facilities, and alternative ways of staffing these beds are needed (eg, with enrolled nurses, physician extenders and technicians).

Increasing capacity through improved processes

Most hospitals still have inefficient processes, despite a decade of process improvement teams, lean thinking and a myriad of other

2 Solutions to access block and overcrowding

Reducing demand

In the community

- Improved funding of complex care for general practitioners and community providers
- Improved planning for end-of-life care
  - ➢ Mandate for residential care
  - ➢ Improved education of community and providers
- Coordination of community services
  - ➢ Reduce duplication between state, federal and community services
- Integrated and coordinated care of "frequent attenders"
- Hospital outreach — hospital-in-the-home, hospital-in-the-nursing-home, and medical assessment teams

In the emergency department

- Senior decision making (24/7)
- Short-stay units
- Accelerated evidence-based protocols
- Access to consultations and investigations

Balancing demand between elective and emergency programs

Increasing capacity

Emergency department processes

- Fast-tracking
- Laboratory and x-ray turnaround times
- Senior staffing 24/7
- Full capacity protocol (send patients to ward when emergency department is full)

Emergency department beds

- Only to the levels recommended by the Australasian College for Emergency Medicine.

Ward processes

- Whole-of-health-service bed coordination 24/7
  - ➢ Designated bed coordinator
  - ➢ Daily coordination rounds
  - ➢ Improved information technology for bed tracking and demand prediction
  - ➢ Long-stay monitoring
- Clinical inpatient rounds at least daily
- Improved speed of investigations and consultations

Ward beds

- Increase to > 3 acute hospital beds per 1000 population

Improving exit

Ward processes

- Morning discharge
- Weekend discharge
- Improved allied health and pharmacy access
- Better use of transit lounge

Community capacity

- Increased residential aged care beds
- Post-acute care services

Monitoring of acute health sector

- Emergency department processes
- Hospital processes
- Community processes

Non-solutions (unproven to reduce overcrowding)

- Nurse on call
- Ambulatory care clinics
- Ambulance bypass ◆

management tools. The lessons learnt from the many projects undertaken must be standardised and implemented across all hospitals. There are few excuses for hospitals not to be using beds in the most efficient manner. Process improvements likely to result in significant increases in capacity are listed in Box 2.

A "full capacity" protocol has been used with some success overseas.[20] This involves "decanting" patients to the hospital ward when the ED is full, thus spreading the load across the hospital. Apart from freeing beds, this process pushes wards to expedite patient discharge.

There must be a direct nexus between financial accountability and clinical care, to ensure that the clinical consequences of financial decisions are apparent to the decisionmakers. Hospitals must function on an extended, 24 hours per day, 7 days per week basis, rather than 09:00–17:00, Monday to Friday. Scheduling of elective surgery must be matched to the availability of beds and allied health services, with demand balanced across the week.

Improving exit from the hospital

Improved processes

The ward discharge process is an important element in utilising hospital beds efficiently. Discharging patients a few hours earlier can free ED space for the expected peak of admissions in the early afternoon. Modifying the conduct of inpatient ward rounds, delegating decision making to ward nurses (event-based discharge), plus innovative use of the transit lounge, and use of unit coordinators to facilitate pharmacy, outpatient allied health and community services, could all help. Specific programs, such as the Post Acute Care Program in Victoria, have played a major role in attempting to coordinate community services after discharge, although coordination between acute and community services has been problematic.[21]

Discharging patients before midday and balancing demand with availability of allied health and other services (eg, physiotherapy) across the whole week are important.[22]

Increased capacity in the community

Changes to family structure and the obligation of families to support family members when they are incapacitated have had a major impact on public hospitals. GPs have also significantly changed their role, with a funding model that supports office consultations of less than 20 minutes, and not coordination of care for patients who require complex interventions outside the office environment. A focus on work–life balance for health professionals has also seen the withdrawal of after-hours support.

Community-based care is provided by multiple agencies involving different tiers of government. This care is frequently uncoordinated and often breaks down because of this. When community-based care breaks down, or is insufficient, patients have no alternative other than to present to the acute hospital sector via the ED. This is inefficient, often results in prolonged hospital stays, and is bad for the wellbeing of patients and their families.

Monitoring the system

In developing any system, it is essential to monitor its components in a valid and reproducible way. Some elements of the emergency system are measured at present. However, the definitions of measurement parameters and the process of documentation vary around Australia, and have been subject to "gaming" (manipulation of data and processing of patients to meet indicators) and

restricted publication, and in many instances have lacked credibility among clinical staff because of alleged manipulation.[23,24] A number of incentive and penalty programs in Australia and overseas have produced variable outcomes and varying responses from clinical staff.[25,26]

It is essential that a unified national reporting system that is both transparent and credible be adopted to measure acute hospital access across Australia. This must include prehospital, ED, hospital ward and residential care parameters. The incoming New Zealand Health Minister has promised effective national surveillance of emergency performance and action to prevent overcrowding.[27]

Non-solutions

A number of commonly proposed initiatives have not been shown to reduce ED and hospital overcrowding, and should not be embraced out of expedience alone.

After-hours ambulatory clinics

There are continued attempts to improve access to GPs by developing after-hours, collocated and "super" clinics for general practice patients. Although access to ambulatory GP services is an important component of the health system, it does not greatly influence access to inpatient beds.[28,29] A more important role for GPs in helping prevent hospital overcrowding is to provide care for complex patients in the home or residential care settings, thus avoiding their transport to hospital and possible inpatient admission. Present funding arrangements make the provision of these services unprofitable for GPs.

Nurse on call

The national roll-out of nurse-on-call services has improved access to telephone advice. However, there is no evidence that these reduce demand for emergency services, and in fact there is significant evidence to the contrary.[30,31]

Ambulance bypass

In the present crisis, ambulance diversion is used in most capital cities as a means of controlling demand. This should be seen as a tool for managing disasters, not for routine demand management.

Conclusion

The Australian and New Zealand health systems face national emergencies that threaten the safety of acutely ill patients across both countries. The solutions are evident and require national leadership to develop a coordinated systematic approach before more lives are lost.

There are effective short-term solutions, such as sending admitted patients to a designated ward area until a ward bed becomes available, planning discharges for earlier in the day, and equalising the spread of elective surgery across the week. Longer-term solutions need to include a sustainable increase in available inpatient beds, as well as better coordination of care for chronic and complex illnesses in the community, better end-of-life planning for older people, and more residential accommodation for the ageing population.

Competing interests

None identified.

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