

Emergency and acute medical admissions: insights from US and UK visits by a Melbourne tertiary health service

International innovations in health care may take considerable time to become widely disseminated into local Australian practice

Health systems throughout developed countries are being challenged to meet higher demand for access to hospital medical and emergency services.

Patients of increasing medical and social complexity are presenting in ever greater numbers at a time of rising community expectations for safety, quality, value and timeliness of health care. While it is agreed that a “whole of system” approach to these issues is required,¹ individual national health systems, health services and hospitals are approaching these problems with a broad spectrum of innovations designed around historical, political, workforce and financial imperatives. Unfortunately, evaluation of new health service initiatives is often undertaken only at a local level and is either never published or only published after a long delay. This means that like-minded organisations may waste time reinventing the wheel or, worse, remain ignorant of the impact of innovative approaches.

In August and September 2010, four of us (HHN, De VS, MJK, AM S) undertook an investigative tour of 13 emergency hospitals in the United States and the United Kingdom to observe innovative approaches to patient flow pathways from the emergency department (ED) to inpatient wards and consider their potential for use at Alfred Health. We aimed to examine ED patient flow; referral practices; ED and ward interactions; internal medicine governance; workforce, training and research initiatives; information technology systems; and opportunities for collaboration in health services practice. On the basis of recommendations from consultant physicians with experience in each country, sites were selected that were high performing, coping well with innovative approaches to common problems, or had clinical, trauma, information technology or governance systems in which we were interested. No site declined our approach and all generously provided time and tours with senior clinical and management personnel capable of summarising their hospital’s approach to emergency and acute medical patient care.

Our observations have been distilled to two main potential avenues for improvement in patient care locally.

Minimise steps in the patient pathway that cause delay without consistently adding value

The first three actions that we suggest are based on reduced door-to-treating-team time being a major early

goal in the patient pathway. They rely heavily on the presence of senior staff who can make early decisions about treatment and streaming, and on responsive inpatient ward staff. To safely adopt any of these approaches, our own inpatient teams must increase their interest, skill, capacity and senior staffing to enable them to accept less-differentiated patients soon after their arrival, whether in or out of normal working hours. These staff need to be supported by early initiation of care plans, with early availability of test results and access to further investigations.

Remove nurse triage from reception in the ED: At several sites in both the US and the UK, formal nurse triage no longer precedes direct patient evaluation. Triage is a necessary response to a crowded waiting room and is aimed at safely managing a delay; however, it occupies nursing staff in categorising the relative urgency of patient care rather than initiating treatment. Rather than managing a queue, hospitals that have removed triage have usually introduced care pathways by which new arrivals are assessed within minutes by a staff member capable of initiating and managing their care early.

Maximise direct admission with ED avoidance: Medical patients frequently endure multiple repetitions of history-taking, examination, observation and investigations during admission to Australian public hospitals. These are tiring for patients and staff alike and lead to delays, errors and staff demoralisation. Nevertheless, the Australian system relies largely on hospital EDs as the “barrier to entry” to inpatient wards for the vast majority of emergency medical admissions.² Many of the US and the UK sites we visited admit a relatively high proportion of patients (10%–40%) directly to wards without prior assessment in the ED. Provided the ward is adequately staffed and equipped, much repetition can be avoided by appropriate senior ward staff meeting the patient early in their admission and providing continuity of care with lesser delays. Links between community referral points and the accepting inpatient and acute medical units (AMUs) are an important part of this structure. In Australia, such units would need to be monitored for quality, timeliness of care and their impact on the numbers of patients admitted to ensure patients were not being admitted unnecessarily. How they might contribute to avoidance of emergency presentations by providing improved telephone advice or redirecting patients to rapidly provided ambulatory care would be of particular interest.

Give ward admitting rights to ED consultants and physicians working in the ED (use of interim orders): The delay between ED staff requesting inpatient admission and the inpatient team reviewing the patient in the ED is a frustration in many hospitals and a major contributor

Harvey H Newnham
MB BS, FRACP, PhD,
Clinical Program Director,
Emergency and
Acute Medicine¹

De Villiers Smit
MB, ChB, FACEM,
Director, Emergency and
Trauma Centre²

Martin J Keogh
GradDipCritCareNsg,
GradDipManagement,
Clinical Services Director,
Emergency and Acute
Medicine²

Andrew M Stripp
BBehavSc (Hons),
MSc (ClinPsych),
Chief Operating Officer²

Peter A Cameron
MB BS, MD, FACEM,
Academic Director
Emergency and
Trauma Centre²

¹ Department of
Medicine, Alfred Health
and Monash University,
Melbourne, VIC.

² Alfred Health,
Melbourne, VIC.

H.Newnham@
alfred.org.au

doi: 10.5694/mja11.10619

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to delayed admission.³ This problem is commonly encountered in the US and UK, and many sites have adopted the solution of giving senior ED staff authority to directly admit patients to wards. The inpatient receiving team is notified of the admission via a handover, without their approval being required, but further referral or investigation then becomes their sole responsibility. Consequently, the inpatient team attends the ward rather than the ED. This model of care requires trust in the ED consultant's judgement, and preparedness on the part of the receiving team to take responsibility for the patient. Agreed processes for transfer of responsibility need to be safe and efficient and to take into consideration the capability of the receiving team to manage a deteriorating patient, as resources will vary according to local casemix, infrastructure and skills. A common attitude in many centres is that the only safe place in the hospital is the ED or intensive care unit. This constitutes a major barrier to reform but at many sites has been countered by the development of a receiving AMU with improved staffing ratios and skill sets.

Implement a broader “full-time generalist” approach to acute medical take: Australian emergency physicians are often forced to choose between silos of subspecialty inpatient medical units when admitting complex patients. The inpatient teams commonly disagree with the allocation and defer acceptance of the patient until further results are completed or another unit has made an assessment, leading to delays in the provision of definitive care. In both the US and the UK, this problem is largely circumvented by a universal medical take team staffed with full-time generalists that accepts all patients except those for whom specific exclusions apply (eg, ICU or coronary care unit patients or patients with haematological malignancy). The majority of UK physicians have received substantial general medical training along with their subspecialty training, or are specifically trained as acute physicians. In the US, most emergency medical patients are admitted to wards under “attendant physicians” who are full-time hospital internists with general medical training. By comparison, the Australian system is open to criticism for time wasting associated with subspecialty teams first refusing admission before the patient defaults to a general medical unit. Consultant review, either in the admitting unit or as a referral service, is frequently the domain of visiting medical officers who are on site for only limited hours. Moving towards an umbrella generalist approach to acute admissions and discharge planning would be facilitated by a shift towards a roster with a higher proportion of full-time receiving physicians capable of providing general medical care, and therefore has implications for doctor training.

Work towards increased flexibility in workforce and training

Boost numbers of full-time generalist medical staff: In the US, hospitalists (hospital-based general physicians) receive just 3 years of postgraduate medical training before becoming eligible to work as attending physicians,

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independently supervising trainees and other health care workers in ward-based medical care. They, in turn, involve subspecialty consulting “firms” as required for individual patients. When their training is completed, hospitalists are employed as full-time staff to a particular service, maximising their commitment to the organisation and the continuity of care in that ward or unit. As mentioned above, in the UK, physicians typically receive substantial general medical training alongside subspecialty training and maintain their capability to participate in acute take. In the Australian system, by contrast, it is difficult to combine subspecialty with general training. Many specialty training committees of the Royal Australasian College of Physicians refuse to accept time spent on general medical acute receiving rosters as part of their prescribed training, forcing trainees interested in acute take to add 1 or 2 more years to their training programs. The paucity of appropriately trained and committed full-time generalist staff results in visiting medical officers being responsible, on a rotating basis, for general receiving duties, which are often deemed of secondary importance to their primary private and outpatient specialty activities.

Train nurse practitioners and physician assistants: The bulk of medical service activity in most medical units in Australian teaching hospitals is conducted by trainee physicians under the supervision of consultant physicians. While good training is essential to any health service, one problem with reliance on trainees for all service work is the frequent rotation of staff required to give trainees broad exposure. This may lead to delays, discontinuity of care, the need for repeated staff orientations, omissions, errors and delays in recognising staff members who are underperforming. Both the US and UK have developed innovative workforce models of nurse practitioners and physician assistants with a defined scope of practice. These staff are capable of many ward-based medical tasks and become longstanding team members without frequent rotation. Anecdotal feedback from many overseas senior clinicians was very much in favour of this approach, provided organisations had the opportunity to select individuals and supplement training to their own standards. Some hospitals had two streams of patient care: medical trainee-based care alongside a nurse practitioner or physician assistant-based service. A similar approach in selected wards could improve continuity of staffing in Australian hospitals.

Which site had most of these elements in place?

The most comprehensive process that we observed was at the Royal London Hospital. Walk-in patients checked in with clerks and were immediately directed, without nurse triage, to paediatrics, “minors” (general practitioner-led clinic) or an ED-led “streaming plus” area. Within moments, patients in the streaming plus area were reviewed by a consultant or senior trainee, rarely spending more than 20 minutes in this phase. Investigations were initiated and patients were discharged, admitted to the cubicle area or transferred directly to the AMU for further

care. Patients found to have been initially inappropriately designated to an area were rapidly redirected to higher care by early medical review. Ambulance arrivals also entered the streaming area unless they were “blue light” (resuscitation) arrivals, in which case they were transferred directly to a resuscitation bay after brief contact with streaming plus staff. The department managed some 110 000 annual presentations in a relatively small department with a surprisingly low number of full-time equivalent medical and nursing staff. Data showing the impact of their model of improved patient flow on the safety, quality and cost of care, however, were limited.

Our overall conclusions

Our overseas colleagues have developed many different approaches in a context of differing patient demands, funding systems and historical training models. While there is a paucity of data about these approaches,⁴⁻⁶ some appear to be offering consistent benefit at a number of sites, suggesting that they may be applicable in the Australian context. Australian EDs offer a high standard of service, but many suffer crowded waiting rooms and cubicles and delays in care compared with EDs in the UK, in particular. Key goals for Australian acute care services

should be to explore avenues for ED avoidance and to improve inpatient unit responsiveness to ED requests for admission or review, possibly through further development of general medical and acute medical services (including AMUs). Collection of accurate data that permit detailed evaluation of the impact on patient care and outcomes, resources, training and cost in the Australian context will be a crucial component of any forthcoming reform of our model of care.

Acknowledgements: We acknowledge the following institutions and their personnel who contributed generously of their time and expertise to our site visits: USA – San Francisco General Hospital, Rush University Medical Center, John H Stroger Jr Hospital, Beth Israel Deaconess Medical Center, Brigham and Women’s Hospital, Massachusetts General Hospital, Mount Sinai Hospital, Bellevue Hospital Center and North Shore Long Island Jewish Medical Center; UK – St Mary’s Paddington, Kings College, Royal London and John Radcliffe Hospitals.

Competing interests: No relevant disclosures.

Provenance: Not commissioned; externally peer reviewed.

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