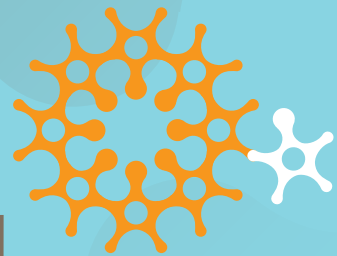


The voice of public healthcare



ahha

australian healthcare &
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ISSUES PAPER

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Managing demand
for acute care

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1. Introduction

The Australian Healthcare and Hospitals Association (AHHA) has convened a policy working group to explore the critical issue of demand on public acute care services, with a particular focus on the effects seen in the emergency department (ED). Emergency departments are generally the most visible area where system-wide dysfunction and lack of capacity manifests – they are the canary in the coalmine. Therefore what happens before and after acute hospital care is also the subject of this paper. This document considers solutions in community care and chronic disease management (for example, care coordination) as well as adequately resourcing aged and transitional care arrangements before and after hospitalisation.

Within the hospital we need to look at regaining capacity, developing appropriate beds for all our patients' needs while they transition through acute and sub-acute care and using our hospitals as 24 hour facilities with a focus on patient flow and timely appropriate discharge. It is vital to understand that these solutions all require an increase in resources to allow efficient function. Robbing one area to fund other policy initiatives is a recipe for worsening dysfunction and further deterioration in system performance. System-wide capacity deficiencies are the root cause of our current problems and require system-wide capacity rebuild.

This group is jointly chaired by:

- Associate Professor David Mountain, Emergency Medicine, University of Western Australia and Staff Specialist – Emergency Medicine, Sir Charles Gairdner Hospital (WA), and
- Associate Professor Stephen Wilson, School of Medicine, University of Notre Dame, and Director, Population Health Program, St Vincent's Hospital, Sydney (NSW)

The membership list of the full working group is included in Section 7.

1.1 AHHA policy development process

During the course of 2008 the AHHA implemented and refined a successful approach to developing national policies. The approach uses a 'Communities of Practice' model that brings together interested professionals across a range of organisational settings and jobs.

Following identification of topic areas for developing policies, through strategic planning with the AHHA National Council, and in response to member issues, the approach applies the following process:

1. Agreement to a **partnership** where applicable;
2. Nomination of a **coordinator(s)**;
3. Formation of a **policy working group** to develop the draft paper (either by invitation and/or open expressions of interest);
4. Discussion of the draft paper at a small number of **teleconferences** involving the full policy group;
5. Discussion of the penultimate paper at a face-to-face **policy think tank** that allows for final refinement;
6. Presentation of the final paper at a high-level **roundtable**; invited guests include Ministers, advisers, senior departmental officers, other stakeholders and members;
7. **Publication** of the paper (print, website, flash drive);
8. **Promotion** of the policy via mainstream and industry-specific media, various health events;
9. **Convening expert delegations** to meet with relevant Ministers, advisers, senior departmental officers and assist with a campaign if necessary; and
10. Ongoing **advocacy** through strategic meetings and organised campaigns as above.

1.2 Key issues

This paper identifies some of the key issues related to access and demand in acute care services in Australia, primarily in public hospitals (section 3). A critical component of AHHA policies is to focus on practical solutions and recommendations to implement good practice, backed up by relevant evidence.

Public hospitals are in need of increased funding, and not only to create more beds. It is clear that one element of addressing pressures in public hospitals must be commitment to urgent additional bed capacity, but it is part of an overall strategy for improving how public hospitals function. Funding must be strategically targeted to address deficiencies in appropriate bed types and numbers for identified populations, ageing infrastructure and equipment. Essential to developing appropriate capacity are workforce issues such

as staffing numbers and skills, the need for more generalists, improved training and morale, and interoperable information technology systems (hardware and software) to allow improved clinical practice and knowledge transfer. Just as important is a focus on research and evaluation of what we implement so we know what works in which environments. One model will never work for all situations and we need well evaluated flexible models of care for the future.

Solutions will be short, intermediate and long term:

- **Short term:** address current capacity blocks, equipment deficiencies and lack of 24/7 focus (often driven by funding/ staffing issues) allowing for restructuring of functions and preparing for more systematic change. It is very difficult to commence these improvements while hospital wards operate at or near 100% capacity;
- **Intermediate:** analysing and systematically implementing what is already known to work – eg. changing professional practice, information/communications technologies, Hospital In The Home (HITH) programs, chronic disease management; and
- **Long term:** structural system and funding changes; building appropriate infrastructure and implementing and assessing new innovations; health promotion and disease prevention combined with more appropriate or new models of care may decrease the rate of rise in acute care demand in the long term.

In the absence of significant action or gains from the above interventions, some fundamental questions need to be considered:

- Is demand for ‘health product’ and health services controllable and, if so, what should the mix of mechanisms include? – eg. public education; overt rationing; maintaining access barriers (the current ‘covert’ approach)
- If capacity cannot be found in aged care, community resources and hospitals, how will rationing decisions be made?

Imperatives to improve how the system responds to demand include the need to design flexible systems that work to provide individualised appropriate care for older people and those with chronic conditions. These systems must be developed with continuous evaluation, openness to change and flexibility of arrangements, and with strong clinically driven leadership at the local level. Change and innovation must be fostered with a focus on the following key governance issues:

- Consumer and carer input, in particular, involvement in and self-management of care – with real time consumer feedback (requires IT enabled/driven system);
- Transparent decision making and single-point accountability (a team based approach with accountable leaders);
- Data and analysis that are appropriate, well-resourced and easy to collect – good data drives change and improvement but needs to be trusted and not get in the way of delivering care. Key performance indicators (KPIs) must be relevant, inform planning and service modelling, and measure the outcomes of the whole system;
- Public reporting of outcomes at the service delivery level (ie. by hospitals, boards) – influencing funding where incentives are built in for funders to resource the areas/population groups of most need, and major penalties exist for ‘gaming’;
- Easily accessible central points of contact to deliver timely resources for complete, flexible community care packages;
- Operation on the basis of continuum of care – patients must be able to understand what is happening to them and why it is happening at a certain point in time;
- Emphasis on efficiency and effectiveness – reducing wastage of resources and limiting interventions that are ineffective or of marginal benefit; and
- Culturally appropriate services.

There is a need for awareness by the general public of the role and demands on emergency departments and in particular the need for real and accessible alternatives to hospital care in acute, but low risk situations. This is especially the case in outer metropolitan and regional areas where acute services are more limited. The ED should be the final thought when someone needs to access health care, except in true emergency situations.

2. Summary of Recommendations

Recommendation AD1 – Capacity building with direct funding and workforce recruitment is essential to allow system reform and provide adequate care whilst this is achieved

It is vital to improve access to acute care balanced against elective surgery and community services. There must be an absolute commitment to regaining 85% average occupancy in

our major hospitals as well as a major increase in community-based capacity, particularly in residential aged care.

Recommendation AD2 – Improved access to responsive, individually-tailored health services wherever consumers interact with the health sector

One of the only ways to guarantee access to comprehensive assessment and multi-disciplinary care is to present to an emergency department (ED) and eventually be admitted to hospital if required. To alleviate some of the resultant demand on public hospitals, there is a need to build mobile and community-based teams whose particular purpose and skills are to provide early comprehensive assessment and direct access to rapid and flexible services as required. This includes easier access to outpatient/ward specialist review and needs to be put in place to allow more fine-tuning of chronic care management and avoid delayed therapy leading to acute deteriorations. See case studies for more information.

Recommendation AD3 – Funding models that allow for greater flexibility regarding how and where services are provided, rather than being based predominantly on a hospital model

A higher acuity of health care is being provided in the community and this will grow appropriately if increased resources are directed to this area. Workforce opportunities and development need to support this through flexible work arrangements where skilled health care staff can provide services at a variety of locations depending on needs of clients/patients and where possible follow the client to allow for greater continuity of care. One example includes expanding physician-led Hospital in the Home (HITH) care as recently examined in the *Australian Health Review* (Tran & Taylor, 2009). Other examples include specific outreach programs from local hospitals for population sub-groups with high ED utilisation eg. the St Vincent's (Sydney) Community Outreach Medical Emergency Team – COMET (Esplin et al, 2007).

This approach may require the use of patient associated funding, vouchers or use of DRGs where the funding is allocated to whoever provides the care. Greater incentives are required for innovative service models and provision, including greater weighting for community based services compared to in-hospital services outside of high acuity and acute recovery phases. It is important that we encourage projects that demonstrate improved performance or efficient delivery by guaranteeing ongoing funding for successful pilot projects. Just as important is to withdraw funding when services are not sustainable or cannot deliver on expectations.

Recommendation AD4 – Improved integration and use of electronic systems for secure communication between GPs, aged care providers, public and private health services, and patients

Health history and care plans should ‘follow’ people into hospital and be easily supplemented or virtually reviewed by clinicians involved in the patient’s care, incorporating timely communication with community care teams on admission/presentation to hospital, during hospitalisation and prior to discharge. Better IT systems will allow for quick access to patient background, results, point-of-care testing and x-rays, for example, to allow for improved decision making during acute episodes.

Recommendation AD5 – In some cases, admission can occur directly to the relevant hospital ward rather than via emergency departments, provided hospitals have the capacity in terms of bed numbers and staffing, and a process to manage these types of admissions alongside internal hospital admissions

This can apply to situations where patients are entering hospitals from community-based care, or from smaller regional hospitals into larger metropolitan hospitals. For example, someone presenting to a regional hospital who requires a higher acuity of health service eg. cardiac investigations/surgery, having already been assessed by a skilled medical practitioner and discussed with the admitting team at the country hospital, this type of planned admission should bypass ED when they arrive at the metropolitan hospital and go straight to CCU for the treatment phase.

Recommendation AD6 – Expanded multi-disciplinary teams and responsibilities to better share the workload and ensure the right mix of workforce to achieve the best results for patients, particularly for chronic disease management

It is often difficult to access GPs as a gateway to higher acuity health services. There is a need to expand capacity in general practice/primary care by better funding and utilising practice nurses/nurse practitioners, extended practice allied health professionals and possibly physicians’ assistants/advanced care paramedics. These expanded role primary care givers should provide outreach, treatment and assessment through a coordinated point (generally the GP) to allow for complex case management and referral to services when and where they are required. An alternative model must be developed for rural and remote areas where workforce is even more constrained; including professional multi-skilling and support, and remote IT-enabled consultations.

Recommendation AD7 – Proper modelling, evaluation and systems-based research of current structures and processes is required to assess the efficacy of interventions and inform sustainability and future practice

More research and evaluation is required to understand the impact and effectiveness of a range of interventions, from specific ED programs to hospital and system redesign. For example, more research is required immediately to assess the effects of alternative acute care options in the community, for instance, on the basis of patient outcomes and the need for hospital care.

We must understand how we currently work and what happens when we change our practices and systems. Otherwise we are destined to continue making the same mistakes without appreciating how all parts of the system are interacting.

Recommendation AD8 – Appropriate use of performance indicators, targets and system redesign to achieve capacity gain in the health system

The UK has demonstrated that systemic use of access targets and system redesign can change patients' access and usage of the ED. A similar project has been started in Western Australia. There are a number of other projects that have achieved or are looking at major system changes within hospitals to grow capacity, drive efficiencies, improve patient flow and discharge, and reduce emergency department overcrowding (for example, Flinders Medical Centre in South Australia). It is hoped that such programs will also increase available capacity and reduce avoidable morbidity and mortality by improving early discharge and removing blocks to patients' diagnostic and therapeutic progress in the hospital.

Recommendation AD9 – Medical assessment capacity needs to be available near or within mental health hospitals/facilities to reduce the need for clients to present and be assessed for medical issues at another location (hospital ED) and then transferred back to the mental health facility/hospital

Ideally, mental health facilities should be co-located with other hospitals and near or co-located with medical units to enable the best access, integration and coordination of care. As discussed above mental health is another area where lack of capacity is a key issue, and where delays in appropriate admission are longer than for any other patient group.

3. What affects demand and responsiveness in acute care?

There are significant and numerous issues surrounding access to appropriate health care for the community, many of which become apparent in emergency departments (EDs) of public hospitals. The ED is at the critical nexus between community-based care and hospital wards. It takes in a huge variety of medical, surgical and psychiatric cases and is a filter not only for emergency care but also end-of-life and chronic disease care. In an ideal system, the ED would have the capacity to accommodate and assess all patients within benchmarked best practice times, be able to admit and move patients onto wards as soon as required, and have in-coming and out-going links to community-based health services for the best management of chronic disease, mental health and aged patients in particular. This should include the establishment of ED bypass processes for direct or early access to review clinics or wards for specific conditions or patients.

In many cases, however, this is not how the current health system operates due to a range of internal and external pressures, not least of which is the common problem that hospitals run at or over capacity. It is well established that the system functions best when average bed occupancy is under 85%, and at the opposite end is severely dysfunctional at over 90% capacity. Unfortunately the tendency in recent years has been towards the upper end of capacity, resulting in the major demand/access crisis in which we find ourselves. The solution must be a mix of increased resourcing and capacity within hospitals and community care, and reform of the systems and practices involved.

These system issues are further complicated and magnified by political interest and media coverage, and public perceptions and expectations around the role of EDs and hospitals generally. The pressures on health services across community and hospital settings are numerous, including:

- Lack of appropriate and sufficient beds in hospital wards for patients requiring admission (problem of running at or over capacity);
- Poor access to diagnostic, specialist and interventional services on a 16-24/7 basis in major acute care facilities (impacting also on community-based services with extended hours);
- Inadequate care coordination, discharge planning and liaison with community services in many hospitals;

- Lack of attention to discharge planning, mobility needs and maintenance of self-care capability for elderly people in acute care settings (e.g. rehabilitation needs to start at admission not pre-discharge);
- Lack of active management and coordination of capacity in hospitals and community services (e.g. poor co-ordination);
- Community-based primary health services that do not have the capacity to provide 24/7 multi-disciplinary care, because they are not systematically funded to do so;
- Poor planning and co-ordination of chronic disease care across all sectors;
- Poor management of expectations from families / patients with severe or terminal end stage chronic disease;
- Lack of subacute beds for people requiring step-down care before returning to home or community care;
- Lack of residential aged care places in the community;
- Workforce limitations in many key areas, particularly nursing and allied health in acute hospitals and nursing homes, general practitioners in outer metro and rural areas, and the lack of dedicated full time 'generalists' who are responsive to the needs of complex co-morbid patients;
- Lack of investment in workable technologies to streamline professional practices, handover and discharge;
- A lack of political will to fund appropriately for recurrent and equipment expenditure required for providing promised levels of care to the community.

3.1 The problem

What is access block?

The inability to admit patients to an appropriate bed in a hospital ward after the decision to admit has been made, normally via the ED

Currently most major public hospitals run at over 90% occupancy for admitted patients with marked overcrowding in the ED a routine occurrence. Some critical effects of these operational pressures include:

- a. Poor outcomes for patients e.g. more deaths (30% more if overcrowded, Sprivulis et al 2006), complications, delayed therapy, inappropriate environments, discomfort, noise, crowding, infection risks (Richardson & Mountain 2009);
- b. Extremely stressful environments to work in, resulting in high staff turnover, poor morale, inter-personal conflict and low job satisfaction (staff unable to work at appropriate level);
- c. Impacts on other important hospital functions e.g. elective surgery “competes “ with acute work for clinicians, patients end up on wrong wards, unnecessarily extended length of stay (LOS) when overcrowded for almost all patients, poor teaching/training capacity and quality (clinicians too busy meeting the needs of patients); and
- d. Inefficiencies in hospital function that then perpetuate worse overcrowding – overcapacity hospitals have higher costs due to LOS, more cancellations of elective/acute operations, delayed admissions for semi-elective management of chronic conditions with patients then coming in as acute admissions when disease deteriorates (ACEM 2008).

These poor outcomes are inevitable in systems that no longer have any flexibility. Although they are experienced mainly at tertiary sites, the data show that many peripheral/general hospitals now have significant access block on a regular basis and even children’s hospitals are feeling these effects.

3.2 What are the key drivers of this problem?

The key drivers of problems in acute care that we are currently experiencing are whole-of-system issues:

- Success of prevention, an ironic dilemma leading to and stemming from an ageing population that has more degenerative disease and longer periods with these chronic disabling conditions (Lynch et al 2007);
- Most people with chronic diseases are likely to suffer acute deteriorations markedly exacerbated by social isolation, poor function and co-morbidity with advanced age;
- Dislocated and disconnected families with changed caring patterns;
- Changing patterns in demand, significantly increased availability and evaluation of treatments;

- Lack of capacity in our health system with changing service patterns (eg. more acute demand, more chronic conditions and episodes, and greater need for and availability of elective procedures);
- Lack of patient focus in our care processes and excessive bureaucratisation and centralisation (beds into offices);
- Governance inefficiencies, funding limitations and lack of national planning.

The public acute care system is seriously under-bedded compared to the OECD average (2.6 versus 3.1 per 1000 population). It is working with 40% of acute bed capacity compared to 25 years ago (on a population/ demand basis). Current demand for acute services is increasing at 3-6% per annum (see ACEM website: www.acem.org.au). It is clear that there is inadequate capacity to deliver expected services within all levels of the health system. This includes; inadequate primary care funding and personnel; underfunded community services (pre- and post-acute care); inadequate aged care bed numbers, appropriate funding/staffing arrangements (at least 10,000 beds short) and payment for medical services at aged care facilities; gross underinvestment in staffed beds for acute/subacute capacity throughout metropolitan hospital system of 3,500-4,500 beds as acknowledged by the current federal government; and serious loss of expertise in regional/rural hospitals without adequate substituted services. On top of this are the severe impediments to efficient and comprehensive care as a result of our current disjointed administrative and funding arrangements. Increased federal funding should be accompanied by guarantees from state governments that their own financial contributions will not drop.

3.2.1 Changing patterns in demand and treatment

The demand for health services is almost unlimited. The population is continually increasing, at high rates (more than 2% per annum) in some areas. Along with the overall increase is the ageing of the population and the inevitably higher rates of chronic illness experienced after the age of 70, the result of living longer on average than our predecessors. Recent estimates have indicated that Australia's population will grow by 65% in the next 40 years to 35 million people (Australian Government 2009 forthcoming).

In the 1960s and 70s, emergency medicine was a small part of a hospital's workload compared to more predictable and manageable elective admissions which generally

occurred between 9am and 5pm on weekdays. In fact the first full time Director of a 'Casualty Department' in Australia was not appointed until 1967 in Geelong, Victoria.

It is now such a central part of public hospital life that it is easy to forget that emergency medicine is a relatively new specialty and that the Australasian College for Emergency Medicine was only established in 1984. Though the ED is a touchstone for public hospitals, they generally only occupy between 2-3% of hospital floor space, and 5-8% of beds. Overall, EDs absorb around 4-8% of the entire hospital costs, with more diagnostic costs for front-end assessment but less for ongoing care and therapeutics.

Between 2003-04 and 2007-08, the number of ED presentations to public hospitals increased by 20%, from 5.9 million to 7.1 million. This equates to an average annual increase in presentations of approximately 4%. In general these increased attendances have similar or higher admission rates eg. they are not GP-type patients but an increasingly unwell population. Prior to 2003, data was not collected in a consistent way (Department of Health & Ageing 2009).

Most patients enter public hospitals through the ED and two thirds of them arrive between 8am and 8pm. The peak for semi-urgent and non-urgent presentations occurs during the morning around 10-12 am.

Part of the reason for these changes is the success of emergency medicine leading to heightened expectations from the community. Increasing availability and promotion of therapeutic and interventional options combined with the development of triage, assessment and diagnosis protocols within the ED setting has saved many lives, particularly for people with acute myocardial infarction, stroke, surgical and medical (eg. asthma, heart failure) emergencies and trauma.

The lack of available general practitioners and community/primary health care services also impacts on demand, offering no real alternative to the ED. Much of this has been due to lack of resourcing (making 24 hour care and home visits difficult to implement), coordinated organisation and planning of services, and deskilling of the workforce. This is particularly the case for after-hours care, as there are few incentives for providers to offer these services in the existing funding/operational system.

There has also been a lack of coordinated planning to respond to increasing rates of chronic disease across the community. The system so far is struggling to change from acute episodic care for mainly single system disease to chronic disease management for multiple co-morbidities.

3.2.2 Lack of appropriate capacity in our health systems

A big part of the problem stems from inadequate physical infrastructure (particularly the number of appropriate beds available) and outdated systems and structures across the whole healthcare industry that were never designed to cope with these changing demands.

Hospitals

There has been almost no increase in the bed capacity of hospitals and other systems to cope with the growth in demand. Relative to demand and population, bed capacity has been dramatically reduced.

Between 2003-04 and 2007-08 the rate of available beds in Australia has remained steady at about 2.5 per 1,000 head of population. We have almost the same number of available beds as we did five years ago, but since then the number of ED presentations has increased significantly and over a quarter of these patients were admitted. Overall demand for acute admission has increased 15-20% during this period and is likely to continue at this rate (Department of Health & Ageing 2009).

In addition to the lack of appropriate beds for expert care, inefficient systems and outdated infrastructure/equipment cause delays and bottle necks for patients moving through the hospital. For example EDs are often small areas quickly overwhelmed if used as a holding area and delays are often experienced in radiology and for other investigations, particularly after hours. Inadequate coordination of inpatient care also significantly increases demand on bed resources, with delays for diagnostics, consultations, or therapies frequently impacting on length of stay. Poor discharge planning is a major problem in managing day-to-day access, as is the concentration of services and activities on a Monday to Thursday, 9am to 4pm schedule in many institutions.

A related issue is the effect on peripheral/regional facilities of not being able to transfer patients to major hospitals for tertiary care, and the drain this has on beds and resources as well as safety and quality.

Community services

The lack of capacity to adequately contend with demand for acute care services extends beyond the hospital walls. At the front-end, as mentioned above, there is inadequate resourcing of community based services/facilities upon which some acute care service

reductions are based. Many services provide excellent care within their resources, however this is not always sufficient to provide the full scope of care required to reduce demands on public hospitals. Included in this are extended hours services that struggle to access specialist diagnostics after hours, similar to the difficulties faced within hospitals themselves.

Following the care received in hospital, there is also a need for better provision of step-down, intermediate and sub-acute services that would allow earlier discharge from acute services, especially for lower care patients.

Similarly, poor provision of residential care options blocks egress from acute care. Due again to the lack of funding for different models of care within residential aged setting, there is limited capacity for intermediate medical care leading to many unnecessary returns to the ED and hospitals.

Presently, state-funded hospitals absorb the high costs associated with extended length of stay for these patients due to the unavailability of appropriate beds in the community sector (a Commonwealth funding responsibility). Incentives should be sought to shift the costs to the most appropriate area, in the context of current negotiations over system and funding reform.

Inadequate palliative care services or linkages between palliative care and acute care services also result in many people with life-limiting conditions arriving at the ED in a crisis situation. Community and intergenerational connectedness and obligations have also broken down. There is generally less willingness or ability to provide care within the family/community and less comprehension of acute deterioration and end-of-life decisions from both healthcare professionals and the community. This drives many attendances at the ED for end-of-life care and some cases where excessive intervention occurs.

Workforce

The lack of health service personnel is also a major factor affecting the capacity of the system to respond to demand. This is driven by many factors including the general lack of planning, capped places, problems around workplace culture leading to poor morale and retention, inadequate and irregular resourcing and economic factors. Many of these issues are further exacerbated by the stressors of access block, excessive emphasis on inappropriate key performance indicators and financially driven care as opposed to patient-centred care.

E-health

The lack of a national plan and strategy for e-health exacerbates poor management of patient journeys through the healthcare system. A nationally consistent e-health system would enhance discharge planning and facilitate coordination of care and communication between hospitals and GP / community care teams.

AHHA has been working to develop solutions in this area and has produced comprehensive Service Integration and Information Management policies which address these issues in more detail. The documents are available on our website or through our office.

4. Hospital-based solutions

As has been rightly suggested part of EDs success (and problems) are that they have been damned by being “departments of available medicine”. This is particularly so when either community/ aged care resources are inadequate, hospitals are under capacity, or for the majority of the week when other services are closed. This leads to a situation where patients have to attend ED to gain entry to any hospital (or even community) service. These are common scenarios for anyone working in current EDs e.g. referrals to ED from GPs for review for an outpatient/ investigation appointment. These are only inappropriate attendances if there are other avenues to access these services in a timely fashion. When looking at the issues relating to hospital delivery of acute care the overwhelming issue is a lack of appropriate capacity to deal with current demand. This is due to a combination of issues as detailed earlier in this paper but serious errors in capacity building plus poor understanding of how our system functions figure highly. Issues that have potential solutions are detailed below.

4.1 Bed capacity

Although there is some inefficiency in the health system and resources may not always be allocated appropriately, there can be no doubt that currently most, if not all, major (teaching) hospitals in capital and regional centres are working over capacity. Immediate action is required to improving capacity in our systems and to allow system redesign and reduce the inefficiencies caused by overcrowding. New beds must be targeted urgently to the most pressing areas that are causing log jams in the system which include, acute care beds, step-down/ intermediate or sub-acute/rehabilitation beds. In addition improved nursing home capacity or service delivery in the community can relieve some pressures.

Grouping beds into admission units (medical/surgical or joint) with reasonably large numbers improves the ability of systems to manage normal levels of demand fluctuation. However there needs to be ongoing commitment to recurrent funding so that new beds can be opened and have adequate staffing as a matter of urgency.

4.2 Improving work practices throughout hospitals

Many practices and work patterns do not make patient flow a priority or expedite care. Systems that have managed to improve access block generally have had buy in from inpatient units and all levels of staff accepting that is everyone's responsibility to make the patient journey as smooth and quick as possible. Strategies that work well are those that treat an acute hospital as a 24 hour a day facility (smoothing the ups and downs in day-to-day variation), expedite and plan early for discharges and improve access to diagnostic and therapeutic modalities. To facilitate these changes requires strong management and the use of strategies that make it obvious that this is a shared/ universal system problem. Drivers for these changes may include use of targets with penalties and rewards for failure to gain access in appropriate times, such as the 4 hour rule in the UK (now being trialled in Western Australia). Other strategies that have shown improved flow for all patients are the use of over-census policies where overcrowding is spread to the wards allowing ED to remain functional and sharing the load of excess patients across the whole hospital. Other whole-of-system redesign approaches (particularly in Victoria) have lead to improved access.

4.3 Use of KPIs/over-census

Key performance indicators and other measures of system function/dysfunction must be developed that accurately assess system overcrowding and inefficiency and allow leverage in driving funding and management strategies to prioritise solutions to these problems. A good start would mandate public reporting of real measures of hospital performance such as patients suffering access block (ie. more than 8 hours to get to a bed, as defined by the Australasian College of Emergency Medicine). In addition, gaming or manipulation of data should be dealt with appropriately and treated as a severe (and possibly criminal) matter.

Strongly implemented targets (such as the 4 hour rule in the UK) or over-census strategies (patients moved from the ED onto wards when ready, not when the ward is ready) have changed culture and mind sets at hospitals. They have improved patient flow and often lead to reduced length-of-stay (LOS) overall throughout the hospital as the whole system sees the patient's journey/access block as their problem not just the ED's.

Specifically, KPIs and benchmarking should be developed as a priority around:

- Acceptable times for progression from ED to “emergency theatre”, eg. is 3 days for an “acute” cholecystectomy or fractured hip acceptable?
- Acceptable times for inpatient review (either after initial admission or following referral)
- Acceptable times for investigation – eg. how long a patient should wait for ECHO/CT/MRI
- More accountability for length-of-stay.

4.4 Modelling acute demand

There is a need to look at optimal capacity in our hospitals that deal with acute demand. We have poor modelling systems for both long term planning and short term management of demand. Without good modelling it is very difficult to plan for future capacity and more importantly the right capacity. In addition administrators need to have good day-to-day models that they can use for planning demand variation on a daily or seasonal basis, eg. when we should time admissions and workload and the benefits of changing work practices. There is minimal funding and staffing/resources to look at improving modelling systems. This should be a priority area for new funding (requiring around \$10-20 million per annum).

4.5 Making the ED more efficient

Many different models of care and changes in ED management have occurred over the last 10-15 years. The ED has been called a change laboratory because the dynamic and unrelenting pressures in this area encourage rapid alterations in practice. There are many possible strategies such as streaming patients, use of observation/clinical decision units, team based care with allied health, senior staff triage, improved communications, access to diagnostics and initial decision making. ED redesign and improved clinical policies should be more broadly implemented across all health systems. However it is unlikely that changing ED processes will achieve major savings to LOS or time in the ED when almost all of the delays are due to problems beyond the ED in the hospital or when the patients come to be discharged.

Most of the long term solutions to access block lie outside of the ED and often out of the acute hospital system. Lack of capacity in our systems is found outside of hospitals and may well be worse. The long term problem is a lack of community support, resources

and coordination for managing complex medical care. Some long term community-based solutions to access block are contained in the following section.

4.6 Splitting elective services from emergent services

A lot of discussion has occurred about splitting elective services from emergent care. There are good theoretical reasons to do this as mainly elective services can run at much higher occupancy levels (90-95%) and can guarantee access to elective surgery and reduce cancellations due to excess acute demand. This should mean that costs for elective work can be reduced per operation/ admission. However it is important to realise that there is a major backlog in elective work and therefore improved access to elective care will increase demand for services and increase recurrent costs. Additionally, to regain capacity for emergent in acute hospitals requires maintaining the beds not required for elective surgery so that acute hospitals can work at 80-85% capacity. Overall this is not a cost or resource neutral change but it is certainly a method of improving efficiency and capacity on both sides of the system and reducing unnecessary competition for resources.

5. Community-based solutions

To address demand on emergency departments (EDs) from the community side, one key solution is to explore the best models for preventing avoidable admissions to hospitals. With burgeoning demand on all health services created by the ageing population and increasing numbers of people with complex chronic conditions, systems must be developed to ensure hospital admission is the last resort where possible – or that if hospital admission is required, it is clearly part of a patient's care plan and the length of stay is kept as short as possible.

EDs require a rapid and efficient system for transfer of acute and sub acute patients to non admitted care as well as admitted care where necessary. There are at least 25 clinical conditions suitable for ambulatory treatment following emergency assessment (NHS 2006). Many of these conditions have been treated at considerable savings of up to 50% of equivalent hospital care (Board 2000, Wilson 2005). Currently there are few alternative pathways for patients from ED for these conditions other than admission to hospital or discharge to self care. Older people with disabilities present additional problems and are frequently admitted to hospital when the medical condition is accompanied by the need for personal care. A number of successful projects have

addressed the need for acutely responsive self care delivered for limited time periods (eg. NSW Health ComPacks – see case study below).

Our vision is a fully integrated health system in which community-based health services (including GPs, multi-purpose services, aged care providers, GP Super Clinics, proposed new Comprehensive Primary Health Care Centres, allied health providers) are supported by communication systems (e-health) and appropriate funding to alleviate the demand pressures currently impacting on hospitals. This includes incentives to target the kinds of evidence based services and models of care that focus on consumer needs rather than reactive to demands on the system or purely profit driven.

5.1 National framework for acute community care

Commonwealth to develop a national framework for the delivery of acute community health care with incentives to engage all existing providers

Alternative systems for patients outside traditional hospital systems have been explored in many instances, particularly Hospital in the Home, and provide a very useful capacity-builder for acute services. In many hospitals these are advanced and fairly mature. However, as they are well validated and effective, they should be considered a normal part of practice and should be maximally expanded in all areas and hospital systems. If additional services can be guaranteed in a timely fashion there is no doubt that early discharge and increased numbers of diagnoses can be managed by these systems. However it is important to realise that these programs require additional capacity, and therefore funding/costs to set up and run these services cannot be taken out of acute hospitals.

Acute care can be delivered in places other than hospital beds and has been the subject of legislative changes related to acute outreach funded by Private Health Funds (Amend National Health Act 2001). Many models of ambulatory care (Wilson 2001), Hospital in the home (Montalto 1999), acute outreach (Shepperd 2004), community acute and sub acute care (NSW Health – CAPAC 2007) have been piloted. These community based services have largely been funded by State Health departments or project grants as a means of reducing ED access block through treatment of avoidable admission types of mostly public patients. The availability of these services is variable from area to area and state to state.

It is important to evaluate the impact of the full range of programs in place across Australia, with a view to determining the most effective and efficient interventions.

5.2 Sub acute services

Sub acute services should be designed to serve the needs of patients attending ED to facilitate the transfer of patients to care in their own place of residence

Sub acute care can be provided directly from ED. Subacute care requires multidisciplinary input which is well coordinated within rehabilitation and palliative care services. These services should be acutely responsive to transfer from ED to a subacute bed. This is particularly the case with patients who have initiated advanced care directives with their GP. The delivery of multidisciplinary community care which includes personal care is far more difficult to coordinate from ED. The “Better care facilitation” in SA (see case study below) is an excellent model for this type of care. Another example is the “Healthy at home” model with purchase of services such as personal care, house cleaning and shopping to assist recuperation. This is a case-managed package of care for up to 6 weeks after discharge from hospital for people who need two or more community services.

5.3 Contingency plans for people with chronic and complex conditions

People with chronic and complex conditions require acute assessment and treatment contingency plans which minimise ED attendance

EDs are inappropriate areas for patients awaiting admission or with chronic illnesses coming in for assessment/management particularly of acute deteriorations. Staff and facilities are not designed for these patients. Systems that allow these patients to be diverted to outpatient centres, day units or admitted directly to wards will clearly improve the patient journey and de stress and reduce crowding in the ED. However most of these solutions require some capacity for these patients to actually get on to a ward/bed within the hospital. Without some improvement in capacity it is actually hard to make hospitals more efficient.

Chronic disease programs focus on secondary prevention and chronic disease management. Registered patients should also have plans developed for the acute management of exacerbations of chronic disease. High risk populations may be suitable for assessment and treatment in their own home through acute outreach response services. Aged care facilities house large numbers people with chronic conditions. These services have a responsibility for assessing and treating as outlined by the RCP paper “the right person the right setting - first time” (RCP 2007).

5.4 Acute medical assessment to bypass EDs

Acute medical assessment of low acuity illness or injury should be available as an alternative to ED or prior to transfer to ED

GP services should be available for rapid assessment of people with acute illness or injury. Ambulance paramedics may play a role in acute assessment and referral to the patients GP to minimise low acuity ED attendances eg. Clinical Assessment and Referral (CARE) Program (Ambulance Service of NSW). Increasing GP services and extended hours of operation are likely to be of value in under serviced geographical areas. Extended hours general practices in these deprived areas which are co-located with ED may be more convenient for patients (Cunningham 2006).

In this context, however, there needs to be more assurance of access to specialist diagnostic services outside business hours and outside the hospital. Co-located GP services have tended to struggle with obtaining timely advice and assessment that means patients often end up in EDs anyway, thus reducing the efficacy of the alternative intervention.

Case study one

Home Support Services Hospital Avoidance Model

With increasing demand for traditional hospital services, government policies are encompassing a primary care focus, with health care delivery moving towards community based hospital avoidance programs.

Home Support Services (HSS) pioneered Hospital Avoidance with the commencement of the Hospital in Your Own Home model in 1989. HSS continues to be a recognised leader and holds an integral position in the wider Hospital Demand Management Strategy in South Australia and Queensland through the provision of a rapid response case management model which enable patients to avoid hospital by receiving high quality, community based care.

Continued over

Home Support Services Hospital Avoidance Model continued

Home Support Services is a private organisation receiving over 20,000 new referrals per year, managing two major Hospital Avoidance and early supported discharge programs:

- Metro Home Link within South Australia funded by the Department of Health SA (commenced 2006)
- Home Health Link within Queensland funded by the Gold Coast Health Service District (commenced 2008)

The aim of Home Support Services Hospital Avoidance program is to:

- avoid preventable ED presentations or hospital admissions identified from General Practitioners, acute care facilities, Emergency Departments, residential care facilities and community care providers;
- assist doctors/specialists to safely discharge patients from hospital earlier than otherwise would have been possible, with immediate support services;
- provide seamless service provision through a case management and coordination model, with flexible, effective health care delivery; and
- ensure safe standards of practice providing a suitable alternative to hospital.

For the HSS hospital avoidance case management model to be effective it has embraced several key principles including:

- Ease of access for all referrals;
 - referrals are sent to a central case management facility and immediately triaged for rapid service commencement
 - communication is available 24 hr / 7 days a week providing confidence, security and responsiveness to patient and referrer needs
 - no age criteria or HACC criteria for entry
- Flexible assessment based case management;
- Rapid, holistic service commencement;
- Collaborative and integrated care model approach with existing community services.

Continued over

Home Support Services Hospital Avoidance Model continued

Case Management

HSS' case management and coordination model is the foundation of the Hospital Avoidance program. To ensure the patient is provided with the services, support and education they require in a time frame that enables them to safely remain at home, a team of skilled case coordinators including Registered Nurses, Midwives, Paediatric Palliative and Psychiatric specialties coordinate the provision of individualised care. The case management model requires close communication with doctors, referrers, patients and other health care professionals to achieve best patient outcomes. This model does not duplicate services already provided but supports them by being the 'glue' that connects acute care delivery and community care.

Holistic Care

HSS case management is enhanced by a multi disciplinary team of service delivery health professionals who communicate up-to-date outcomes of patient care to the primary case coordinator following each visit. This enables the HSS case coordination model to provide a flexible and holistic hospital avoidance plan of care based on patient outcome evaluations.

Liaison Services

HSS provides a Liaison Team of Registered Nurses who establish and maintain relationships with Acute Care Facilities, General Practitioners/Specialists and Aged Care Facilities. The Liaison Team provide support, education, assistance for patients in crisis, problem solving of complex care needs and assist in identifying appropriate hospital avoidance referrals.

HSS' Hospital Avoidance program offers a diversified range of flexible health care services including:

- Specialist or clinical Nursing
- Allied Health- Occupational Therapy/ Physiotherapy.
- Mental Health specialists- Registered Psychiatric Nurses
- Palliative care coordination

Continued over

Home Support Services Hospital Avoidance Model continued

- Paediatric and midwifery
- Chronic disease management
- Mobility and home environment assessments
- Restorative and Rehabilitation programs
- Equipment supply
- Personal care
- Transport assistance and transition to home
- Carer respite and support
- Overnight support
- Domestic assistance
- Emergency Accommodation

Impact

The commencement of the Home Health Link program on the Gold Coast has contributed to reducing capacity alerts from 15 to 0 and hospital bypasses from 7 to 0. The program has assisted in a drop in the average length of hospital stay and elective surgery cancellation has reduced by 71%. Outcome evaluation of the model considers impact on greater bed management control and increased capacity and flexibility within acute care facilities.

Home Support Services' initiatives play an integral role in demand management within the South Australian and Gold Coast regions through the delivery of an efficient and effective care model of community based hospital avoidance.

Case study two NSW Ambulance Service

Clinical Assessment and Referral (CARE) Program

The primary aim of CARE is to deliver the right patient to the right place to receive the most appropriate care. CARE practice provides a structured system for the assessment of patients against evidence based criteria and the provision of non-transport alternatives to low risk patients who have the capacity and competency to decide a preference for their treatment.

CARE is implemented by authorised paramedics who have successfully completed enhanced patient assessment and CARE pathway specific three-day training. There are now 400 paramedics trained in CARE from Sydney and several rural areas. CARE paramedics are not referred to specific cases nor dispatched on the basis of their CARE skill set.

Non-ED care options include self care with advice, recommendation for care and immediate referral for care. The application of CARE has been greatest for 'minor wounds and lacerations', 'epileptic post-ictal' and 'diabetic hypoglycaemia' pathways. This program has been shown to reduce the number of transports to Emergency Departments and has received very positive feedback from all stakeholders.

The Extended Care Paramedic Program (ECP)

The principal inspiration of the ECP program is to be able to offer safe and effective healthcare choices other than being transported to an Emergency Department for selected low acuity patients consenting to being treated under an ECP pathway. To achieve this required an increase in the scope of practice for a small group of selected paramedics in patient assessment and management of minor illness and injury presentations.

The ECP Program has provided evidence that 38% of patients attended to by an ECP are not transported to an ED in comparison to 22% for standard care ambulance.

Case study three

Better Care in the Community Facilitation, Country Health SA

The thirteen Better Care Facilitation sites in country South Australia were selected based on available hospital separation data for the targeted Service Related Groups (SRGs), the size of the population to ensure a significant mass and in the case of the Adelaide Hills the large number of people from that area accessing services at metropolitan hospitals (in particular the Royal Adelaide Hospital). An overlay of Aboriginality was provided to ensure funding provision to support better health outcomes for this group of the population.

The 13 Better Care Facilitation sites are located in Ceduna, Port Lincoln, Whyalla, Port Augusta, Port Pirie, Wallaroo, Riverland, Gawler, Murray Bridge, Millicent, Mount Gambier, Mount Barker and South Coast.

Consistent with the SA Health direction to refocus from in-hospital to primary care services these *Better Care in the Community* responses have a vital and ongoing role including:

- System and process development
- Working in a flexible and responsive way to address the core issues behind repeat hospital admissions and Emergency Department presentations for people with chronic conditions, based on individual client experiences and learning from these
- Supporting and developing effective individual clinical pathways for clients in partnership with General Practitioners
- Local change facilitation
- Liaison between service providers to better coordinate care

Continued over

Better Care in the Community Facilitation, Country Health SA continued

This initiative has resulted in Country Health SA being able to identify:

- Reduction in the number of presentations at and admissions to country hospitals for people from country SA within the target chronic disease groups demonstrated through occupied bed days saved at all large country hospitals
- Reduction in length of hospital stay in country hospitals for people from country SA within the target chronic disease groups demonstrated by the large number of Rapid Intensive Brokerage Support services provided to reduce length of hospital stay or reduce admission
- Increased number of people with chronic disease enrolled in self management courses/groups
- Seamless multi-disciplinary team approach to patient care for people with chronic disease evidenced by the documented linkages and integration between many service providers at local level to coordinate care for clients.

Case study four ComPacks

ComPacks, is funded by NSW Department of Health and is a case-managed discharge from hospital that includes a brokerage package of care for up to 6 weeks after discharge from hospital.

This service has been established for people who need two or more community services to ensure that people can return home safely with appropriate care in place. The concept is to case manage community support jointly with a multidisciplinary hospital team, starting before discharge and continuing for a short time after discharge, with the aim of facilitating access to mainstream community services.

The ComPacks service model provides co-ordination of referrals from EDs, hospital wards, geriatricians, respiratory and cardiac specialists, and psychiatrists to ensure planning and access to community based services that will maintain stable long term living in the community resulting in fewer days required by the person in hospital.

The service (together with the hospital clinical team) involves:

- Community assessment and case management of targeted people being discharged from public hospitals
- With the purpose of rapidly assembling individualised community care packages
- Designed to meet each person's assessed clinical and support needs

Reducing hospital stays of more than 14 days

Many wards experience delays in discharging frail people with multiple needs. ComPacks provides immediate access to community services to make sure there will be a safe discharge. In addition, ComPacks pursues negotiations for services that take some time to commence so that sustainable care arrangements are in place within 6 weeks.

Continued over

ComPacks continued

Vignette

Mr E, a 79 year old man, had many admissions due to a severe chronic illness and complicated co-morbidities. His wife cared for him and both their mothers in the same household. So that the wife and her household could make good choices for the future, a lot of information was provided to the family on formal and informal service supports. Equipment provided included bed, mattress, walker, commode and the like. Joint case management with community nursing was ideal to build support for this household. Community nursing provided chronic and complex care monitoring and medication support. Through the case manager, a mix of private, package and home care services was established to cover domestic needs, respite was arranged for the middle of the day needs, and previous service providers were changed so that a single service provided for all their needs. Mr E had no further admissions over the next 12 months.

Surgery support

Referrals from surgical wards where LOS is likely to be extended for personal needs rather than clinical needs is an effective way to utilise ComPacks. Referrals for elective surgery eg upper limb procedures can result in avoiding an admission after surgery.

Vignette

Mr B was a young man who, undertaking casual work, had a fall resulting in multiple fractures of both arms and one knee. His estimated date of discharges was nine weeks after admission because he was unable to use his hands for eating and personal care until the splints were removed. Through a ComPacks referral, he was discharged after surgery and services were arranged to provide all support that was required for him to recover at home. His LOS was reduced by 56 days.

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