Department of Health

health

Supporting the medical inpatient journey

A guide for health services

State Government Victoria

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Published by the Performance, Acute programs and Rural Health Branch, Victorian Government, Department of Health, Melbourne, Victoria.

Authorised by the State Government of Victoria, 50 Lonsdale Street, Melbourne.

This document is also available in PDF format on the internet at:
www.health.vic.gov.au/medicalinpatient

June (1106013)

List of symbols and abbreviations

After-hours general practice (AHGP)

Aged care assessment service (ACAS)

Ambulance Victoria (AV)

Chronic disease management (CDM)

Council of Australian Governments (COAG)

Emergency department (ED)

General practitioner (GP)

Geriatric evaluation management (GEM)

Health Independence Programs (HIP)

Hospital Admission Risk Program (HARP)

Hospital Admission Risk Program – Better Care for Older People (HARP-BCOP)

Hospital in the Home (HITH)

Identification Situation Background Assessment Response (ISOBAR)

Intensive care unit (ICU)

Length of stay (LOS)

Medical assessment and planning unit (MAPU)

Monash Medical Centre (MMC)

Post-acute care (PAC)

Rapid assessment and discharge (RAD)

Residential aged care facilities (RACF)

Service coordination tool templates (SCTT)

Situation background assessment response (SBAR)

Short stay unit (SSU)

Sub-acute ambulatory care services (SACS)

Contents

Introduction

Emergency medical conditions are a common reason for admission to an acute hospital bed in Victoria. Most of these patients are admitted from the emergency department (ED) with a non-emergency health problem (almost 80 per cent are from Australasian Triage Scale categories 3 or 4) and few leave the ED within the target timeframes. Projected population changes and implementation of a new four-hour national access target are expected to significantly impact service delivery models for acute medical care in the near future.

The goal of services to meet the needs of emergency medical admissions is to ensure patients get the best care, delivered to the highest standards in the most effective, efficient and personalised way. Strategic goals for the reform of acute medical inpatient care are to:

- treat in the most appropriate setting by providing new and/or enhanced use-of-service options that are appropriate alternatives to ED or inpatient care
- enhance patient flow to the earliest definitive care in the best location
- effectively transfer care from acute settings and integrate care across all clinicians, services and settings involved in care delivery
- build capacity to identify and make appropriate improvements and sustainable results.

The Redesigning Hospital Care Program supports implementation of service improvement and reform through the application of process redesign methodologies to map, review and redesign the patient journey to meet demand and ensure that care is safe, effective and efficient.

As emergency medical patients will often receive care across one or more care settings, opportunities to improve the processes of care for emergency medical inpatients must be considered across the interfaces between the pre-hospital setting, the ED and the acute or sub-acute inpatient wards.

About this guide

This guide provides a list of initiatives that can be used by Victorian health services to improve their emergency medical inpatient services and assist meeting the four-hour national access target.

The initiatives described in this guide address the strategic goals for service reform across three patient care settings:

- pre-hospital
- emergency departments and
- inpatient settings.

The guide recognises that the utility and potential for success of specific improvements will vary according to the specific problems identified, the size, culture and capability of the health service, as well as demand and service profile.

Who the guide is for

Frontline clinical staff and managers can use this guide for self-assessment of their service delivery and to identify potential new ideas to test and adapt in their local context. Organisational leaders can use this guide to review their services, or to plan improvement and innovation efforts.

How the guide was developed

Advice from the Acute Medical Inpatient Advisory Committee (the Committee), executives and expert clinicians responsible for acute medical service delivery and clinical care at metropolitan, regional and rural health services, has informed this guide.

Examples from key literature and experiences from within Victorian health services are used to illustrate opportunities to improve services and processes of care delivery for emergency medical inpatients. For each initiative, the committee has provided advice based on their own experiences of valuable factors for success, potential to assist meeting the four-hour access target, estimated costs of implementation and operation and implementation difficulty.

Initiatives to improve acute medical services

Patient setting or	Treat in the most appropriate setting	Improve acute hospital flow	Effective discharge
Pre-hospital and outside the acute hospital	1.1 Health advice services 1.2 Ambulance referral direct to alternatives to ED care 1.3 After-hours general practice clinics located near or adjacent to EDs 1.4 Residential aged care in-reach 1.5 Health independence programs 1.6 Rapid access clinic		3.1 Deliver ongoing acute care outside the acute hospital 3.2 Case-manage discharge support for high risk discharge and repeat attenders
Emergency department	1.7 Direct access to most appropriate services from first ED contact	2.1 Risk assessment and screening 2.1 Use standard admission criteria and care pathways for common conditions	3.3 Use standard discharge criteria for common conditions
Inpatient setting		2.3 Medical assessment and planning units 2.4 Monitor and match capacity and demand, including electronic tools 2.5 Tools to assist communication between clinicians within acute care 2.6 Multidisciplinary ward rounds	3.4 Tools to assist communication with out-of-hospital settings 3.5 Discharge planning 3.6 Timely departure from acute beds 3.7 Minimise functional decline for at-risk people across the care episode

In the following pages, each of these initiatives is described and examples are provided along with committee advice about benefits, risks and key success factors. In addition, advisory committee perspectives are provided on the potential impact, estimated cost and difficulty to implement in an effort to assist local organisational decision making, planning and selection of activities using the following scale:

⬢ – limited ⬢⬢ – moderate ⬢⬢⬢ – significant

1. Treat in the most appropriate setting

Guiding principles:

- **Services are appropriate to meet the person's health care needs and responsive to individual patient needs and preferences.**
- **Services are delivered at the most appropriate time and location first time.**
- **Services are sustainable and use resources wisely.**

1.1 Health advice services

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Description	Telephone and/or online services provide a single point for consumers and clinicians to access advice about health needs and/or hospital services.
Evidence and examples	NURSE-ON-CALL[1] telephone triage services offer standardised advice, demand management (primary care and ED), and equity of access.[2] • A consultant telephone hotline can be both feasible and effective at reducing delays for selected patients.[3] • Victorian directory of health services [4] • Southern Health specialist directory [5]
Benefits	Equity of access and a consistent standard and quality of responses. Appropriately skilled health professionals can support choice of and access to the most appropriate service. General health telephone enquiries can be diverted, for example NURSE-ON-CALL. Reduce access delay for some patients. Reduced telephone distractions and demands on staff. As services are now well established, ongoing costs and effort of implementation are reduced.
Risks	Risk mitigation may increase diversion to the ED. Potential for unintended increase in demand. Difficult to evaluate outcomes, for example if advice was not followed. Maintaining accuracy of information (for example general practitioner details) over time.
Success factors	Use a single point of contact for clinicians and community. An online directory of services to access specialist service and clinical advice mechanisms to maintain up-to-date information.

1 http://www.health.vic.gov.au/nurseoncall/
2 St George I et al. 2008, 'Universal telenursing triage in Australia and New Zealand: a new primary health service', *Australian Family Physician*, vol. 37 no. 6, pp. 476–79.
3 Kerr E et al. 2010, 'A telephone hotline for transient ischaemic attack and stroke: prospective audit of a model to improve rapid access to specialist stroke care', *BMJ*, vol. 341, c3265.
4 http://www.health.vic.gov.au/services/
5 http://www.southernhealth.org.au/Specialists_Directory/

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1.2 Ambulance referral direct to alternatives to ED care	
Description	Ambulance services refer patients assessed as not requiring transport to hospital directly to an alternative service.
Evidence and examples	In Victoria approximately six per cent of 000 ambulance callouts are transferred to a call-referral service. This service provides health advice and referral to alternative care options. Health services communicate with Ambulance Victoria (AV) to provide details of their services that can enable AV to offer the patient an alternative to the ED in suitable cases. AV have case management and protocols for high users of services. • Peninsula Health rapid assessment and discharge (RAD) service
Benefits	Appropriately skilled health professionals can support choice of, and access to, the most appropriate service. Curb demand for ambulance transport services. Facilitate decision making about service-use and support care in the best place. Avoids unnecessary transport and/or ED presentation.
Risks	Unintended increase in demand.
Success factors	Linking to existing services can minimise establishment and ongoing costs as well as effort of implementation. Link to local out-of-hospital services, for example outreach. Promotion of local services with ambulance service. Regular meetings between local ambulance and hospital representatives.

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1.3 After-hours general practice clinics located near or adjacent to EDs	
Description	After-hours general practice (AHGP) clinics are special-purpose services located within, near or adjacent to a public hospital ED. Clinics provide timely, safe and accessible primary medical care services outside business hours.
Evidence and examples	AHGP clinics can reduce low-urgency presentations to the ED by up to eight per cent.[6] • framework for the Victorian co-located after-hours general practice clinics [7] • clinical governance framework and toolkit [8] • Peninsula Health • Royal Children's Hospital • Southern Health: Monash Medical Centre
Benefits	Reduce ED congestion. Avoid unnecessary ED care for non-urgent conditions. Patients not required to travel.
Risks	Access to diagnostics. Mitigation of clinical risk. Unintended increase in demand for primary care services.
Success factors	Link patient back to primary care provider for ongoing care. Clinical governance agreements between the hospital and the clinic. Collaborative agreements for referrals and information transfer between services. Risk management strategy established between the health service and clinic.

6 Buckley DJ et al. 2010, 'The effect of a general practice after-hours clinic on emergency department presentations: a regression time series analysis', *Medical Journal of Australia*, vol. 192 no. 8, pp. 448–51. O'Kelly FD et al. 2010, 'Impact of a GP cooperative on lower acuity emergency department attendances', *Emergency Medicine Journal*, .vol. 27, pp. 770–73.
7 http://www.health.vic.gov.au/emergency/models.htm
8 http://www.health.vic.gov.au/emergency/

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1.4 Residential aged care in-reach	
Description	Residential aged care in-reach provides access to clinical assessment and treatment from health services into residential aged care facilities (RACF).
Evidence and examples	Residents of RACF have a high annual risk of transfer to ED; at least 40 per cent of transfers are not admitted to hospital [9] and most of those hospitalised for acute illness do not require prolonged hospitalisation.[10] Less than two per cent of ED presentations are from RACF. Most referrals to ED from RACF occur during the day. Visiting nurse and/or physician teams can improve care outcomes for older residents.[11] In-reach programs operate at 10 Victorian health services.[12] • Western Health • Peninsula Health • Bendigo Health
Benefits	Avoid or facilitate ED and/or acute admission as required. Avoid unnecessary travel (including. ambulance) to hospital. Patients can be supported to be sent from ED back to RACF. Supplement services in nursing homes.
Risks	Initial start- up issues and costs, particularly engagement of local RACF. Service for low numbers may not be cost effective.[13] Quality of staffing and skill mix in RACF, end-of-life decision making, communication and bureaucratic requirements can impact treatment options.[14] Substitute for care that is the responsibility of RACF services.
Success factors	A single point of contact for reliable 24/7 access to services. Match service availability to demand; modify services during low demand periods after hours, for example midnight to 5.00 am. Team skilled in acute, community and aged care nursing liaison. Part-time medical leadership support from an acute care geriatrician is most valuable and cost effective. Extend the program to older people resident in the community with ambulance or telephone triage of calls.

9 Arendts G, Howard K 2010, 'The interface between residential aged care and the emergency department: a systematic review', *Age and Ageing*, vol. 39 no. 3, pp. 306–12.
10 Finucane P et al. 2000, 'Use of in-patient hospital beds by people living in residential care', Gerontology, vol. 46 no. 3, pp. 133–38.
11 Boult C et al. 2009, 'Successful models of comprehensive care for older adults with chronic conditions: evidence for the Institute of Medicine's "retooling for an aging America" report', *Journal of the American Geriatric Society*, vol. 57 no. 12, pp. 2328–37.
12 http://www.health.vic.gov.au/agedcare/downloads/aged_care_policy09.pdf
13 Arendts G et al. 2010, 'Can transfers from residential aged care facilities to the emergency department be avoided through improved primary care services? Data from qualitative interviews', *Australasian Journal of Ageing*, vol. 29 no. 2, pp. 61–65.
14 ibid.

1.4 Residential aged care in-reach (cont.)	
Success factors (cont.)	Ongoing communication with RACF and other stakeholders. In-reach teams supportive towards RACF staff; assist with local capability training. Enlist RACF as partners in the service; assisting with decision making and treatment issues by developing standards, protocols and clinical management guidelines. Liaise with GPs for local adaptations and discharge protocols. Facilitate advanced care planning and preferred end of life care to avoid unwanted readmission or active treatment.

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1.5 Health independence programs	
Description	Health independence programs (HIP) deliver in-home support from a range of community-based services.
Evidence and examples	Health independence programs guideline [15] services include: • post-acute care services • sub-acute ambulatory care services, including centre-based and home-based • Hospital Admission Risk Program (HARP) services; HARP – Better Care for Older People services
Benefits	Avoid unnecessary use of acute hospital services. Prevent or reduce acute inpatient stay and release acute inpatient beds. Care and services can be tailored to individual patient needs. Preserve function and independence. Support early discharge by increased discharge options.
Risks	Delay in access or availability of service. Multiple complexity, suitability and eligibility criteria.
Success factors	Multiple services are underpinned by common processes, common assessment practices and protocols, including shared assessment and care planning across different programs. Reliable and effective communication systems. Build on existing infrastructure. Availability of after-hours services. Use a defined point of access to link into the range of services that an individual needs. Liaison roles linked to high-use acute services, for example in the ED and inpatient wards. Common referral practices and protocols to facilitate transition between programs. Coordination of services between programs. Guidelines for programs are complementary and consistent. Processes that support continuity of care.

15 http://www.health.vic.gov.au/subacute/hip-manual08.pdf

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1.6 Rapid access clinic	
Description	Rapid access clinic services provide same or next-day access to unscheduled advice and/or care from specialists.
Evidence and examples	These services can deliver access to specialist advice, assessment, treatment diagnostics, investigations, ED or ward based review clinic. A daily rapid access medical clinic allows for the safe management of a variety of medical complaints in an ambulatory fashion.[16] • Barwon Health: next-day review of early acute medical discharge
Benefits	Provides an alternative to the ED for non-urgent, same day or unscheduled care for stable patients at risk of deterioration associated with waiting. Supports early discharge, for example a patient can go home overnight and have a planned next-day review. Can support primary care clinicians to deliver care in the community or refer as appropriate (for example, telephone advice).
Risks	Appropriate patient selection and exclusion, for example need for use of selection criteria and/or triage assessment prior to diversion. Location, for example on ward (medical, day beds, consulting room) or remote to service (in specialist clinic). Unintended increase in demand; meet a gap in services versus generating new demand. Demand may impair access or other roles of consultants.
Success factors	Access to services for unscheduled care is provided within a specified time frame and appropriate to demand (for example, same day, next day, 48 hours). Linked to a hub of service streams for short-stay acute medical patients; share or pool resources, for example general medicine, geriatric, medical assessment and planning unit (MAPU), outreach, resi-care, hospital in the home (HITH), sub-acute, chronic disease management (CDM). Use of existing infrastructure can reduce costs and effort Establish relationships with other services, for example ambulance access, private systems, GP, ED, chronic disease, HIP. Locate in a place most convenient for patients and clinicians, for example MAPU, acute hospital ward, specialist clinic. Clinical staff have competencies in acute medical care (general physician/advanced trainee) and supported by in-reach from specialist and multidisciplinary teams. Size and operating times match demand. Criteria used to predict suitability, for example stable patient Smooth flow of patients to avoid bottlenecks, for example controlled flow, protected appointments planned. Clear mechanism for access: referral or review only and/or walk-in service. Referral by review by treating clinician (for example next day), diversion from ED, community clinicians, specialists, HARP, CDM, residential care. Capacity to deliver same-day specialist medical treatments and interventions, but not overnight stay.

16 Jamdar RP et al. 2010, 'Impact of a new daily rapid access medical clinic in a Scottish district general hospital', *Emergency Medicine Journal*, vol. 27 no. 7, pp. 530–32.

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1.7 Direct access to the most appropriate service from first ED contact	
Description	Patients are directed to the services and setting most appropriate to deliver treatment for their acute-care needs as early as possible.
Evidence and examples	Early access to specialist management can improve outcomes and reduce hospital stay for medical emergencies.[17,18] Fast-track services [19] can reduce length of stay for low complexity or likely discharge patients. Medi-hotel services can be used for self-caring people accessing hospital services and overnight pre-discharge. • new roles in ED and acute medicine such as nurse practitioner, discharge/care coordination services, patient flow coordination, case managers, liaison roles across acute and sub-acute services, and primary care physiotherapy [20] • rapid access specialist advice/clinic for low-acuity and/or chronic disease can prevent admission [21] • streamlined referral processes from ED to community geriatric services and outpatient geriatric care • direct access to inpatient care models for appropriate patients, for example non-urgent, GP or clinic referrals
Benefits	Reduce unnecessary demands on ED and inpatient beds. Patients with non-urgent conditions rapidly move to an alternative definitive care or service suited to clinical needs. Minimise risk associated with acute hospitalisation.
Risks	Creating multiple queues/compartments impacts efficiency and effectiveness. Direct discharges from ED may need to be prioritised.
Success factors	Real time or early access to senior clinician decision-maker 24/7. When needs are clear and non-urgent, reduce time investigating in ED. Direct access to inpatient care models from community clinicians, GPs, outpatients and inter-hospital transfers. Standard pathways that allow direct access to the setting most appropriate for definitive care in inpatient, sub-acute community and clinic settings. Develop standard criteria for streamed admission of common and high volume patient groups. Delegate authority to access services. Senior clinician/consultant roles for acute services with a high volume of referrals; or telephone access to consultant. Stream services by grouping patients with similar process and/or service needs and tailor services to meet those needs. Review roles of junior doctors in services with slow referrals.

17 Bewick T et al. 2009, 'Does early review by a respiratory physician lead to a shorter length of stay for patients with non-severe community-acquired pneumonia?', *Thorax*, vol. 64 no. 8, pp. 709–12.
18 Moore S et al. 2006, 'Impact of specialist care on clinical outcomes for medical emergencies', *Clinical Medicine*, vol. 6 no. 3, pp. 286–93.
19 http://www.health.vic.gov.au/emergency/
20 Wilson A & Shifaza F 2008, 'An evaluation of the effectiveness and acceptability of nurse practitioners in an adult emergency department', *International Journal of Nurse Practitioners*, vol. 14 no. 2, pp. 149–56.
21 Australian and New Zealand Society for Geriatric Medicine 2008, *The management of older patients in the emergency department*, http://www.anzsgm.org/

2. Improve acute hospital flow

Guiding principles:

- **Timely, convenient and responsive care is accessible when needed 24/7.**
- **Evidence-based protocols, care pathways and processes are used to guide, safe, high quality care that reduces unnecessary variation and achieves desired outcomes.**
- **Efficient processes avoid delays, duplication and waste.**
- **Clear responsibility for patient care facilitates timely patient movement.**

2.1 Risk assessment and screening	
Description	Tools used to identify risk and prompt appropriate response for interventions or referrals to meet ongoing care needs (for example discharge, falls, clinical deterioration).
Evidence and examples	An effective discharge risk assessment is one that is carried out prior to, or on, admission to hospital, is broad enough to cover most common issues and is associated with specific risk management actions. Physiological abnormalities can be used to predict risk of deterioration and the level of acute-care needs for medical patients.[22] Preserved function and the absence of delirium are strong predictors of short length-of-stay for older medical patients.[23] Discharge risks include polypharmacy, pressure sore, special dietary needs, cognitive impairment or poor mobility. • Peninsula Health multidisciplinary risk assessment • Southern Health comprehensive risk screen
Benefits	Minimise risk and manage demand by appropriate referrals. Facilitate rapid or direct access to sub-acute services, Aged Care Assessment Service (ACAS), HARP and chronic disease management programs. Highlight problems and trigger actions to prevent problems in the discharge and avoid readmission of a patient.
Risks	Processes to trigger or activate response and/or protocols. Poor coordination or duplication across and within disciplines. Variable tools and poor reliability of some tools.
Success factors	Start screening in the ED; build on this in wards. Actions and responsibility attached to risk assessment outcomes. Screening tools use suitability criteria to identify patients to be cared for in a sub-acute service and assist referral into that service. Multidisciplinary documents that incorporate both safety and discharge risk assessment. Coordinate responsibility for common tasks, for example single assessment and plan across disciplines. Early identification and referral of suitable patients to be seen by specialist teams, for example ACAS team. Specific allied health intervention can minimise delay and support timely departure from an acute bed.

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2.2 Use standard admission criteria and care pathways for common conditions	
Description	Evidence-based, practice-informed care pathways.
Evidence and examples	Complete care pathways that are continuously maintained to reflect the latest evidence, expert opinion and cognisant of policy information.[24] Routine transfer to ward criteria. • Barwon Health • Alfred Health
Benefits	Reduce variations in practice, particularly for high volume or similar presentations. Improve system reliability and care standards. Facilitate timely access to most appropriate care.
Risks	Inappropriate patient placement. Individual patient variables can 'get lost'. Clinician adoption and compliance. Costs for electronic systems.
Success factors	Commence early in the ED stay. Broker agreement amongst inpatient teams to allow admission rights for early transfer of patient to an appropriate ward. Criteria written into guidelines or pathways. Use interim orders for care of selected patients admitted to home wards, may be pending investigation results and/or avert detailed workups in ED. Use reliable systems, for example electronic. Automated prompts and feedback loops. Auditable. Appropriate committee to oversee, audit and performance manage inappropriate admissions; consultants asked to justify their decision to admit.

22 Groarke JD et al. 2008, 'Use of an admission early warning score to predict patient morbidity and mortality and treatment success', *Emergency Medicine Journal*, vol. 25 no. 12, pp. 803–06. Cei M, Bartolomei C, Mumoli N 2009, 'In-hospital mortality and morbidity of elderly medical patients can be predicted at admission by the Modified Early Warning Score: a prospective study', *International Journal of Clinical Practice*, vol. 63 no. 4, pp. 591–55. Considine J, Thomas S, Potter R 2009, 'Predictors of critical care admission in emergency department patients triaged as low to moderate urgency', *Journal of Advanced Nursing*, vol. 65 no. 4, pp. 818–27.

23 Basic D, Khoo A 2009, 'Admission variables predicting short lengths of stay of acutely unwell older patients: relevance to emergency and medical short-stay units', *Australian Health Review*, vol. 33 no. 3, pp. 502–12.

24 See http://mapofmedicine.com/

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2.3 Medical assessment and planning units	
Description	Medical assessment and planning units (MAPU) provide the earliest definitive care in a physician-led unit that delivers short term (up to 48 hours) assessment and care for emergency medical admissions. Provides an alternative or substitution for ED or multi-day inpatient care for high volume non-urgent acute medical patients.
Evidence and examples	Delivers short-term acute medical care. [25, 26] Early definitive care (MAPU) can decrease length of stay and ED waiting times, manage increasing admissions,[27] increase the percentage of patients discharged <48 hrs,[28] increase the proportion of patients cared for by the appropriate specialty team [29] and avoid admission to the wrong unit/ward. Early access to appropriate specialist care can improve outcomes for emergency medical patients.[30] • 14 Victorian Health services operate MAPUs
Benefits	Reduce ED demand from non-urgent patients. Avoid prolonged stay in hospital that leads to deconditioning of a previously well older person. Keep outlier rates down and meet access time limit criteria. Can deliver good outcomes for expenditure.
Risks	May require significant organisational and culture change. Significant capital and workforce investment may be required. Delays if unable to respond to demand 24/7. Can experience bed block, unnecessary movement of patients between carers and locations (wards) and variable outcomes depending on the model used.
Success factors	Linked with organisational change management. Use standard definitions and naming conventions (for example MAPU, SSU). Delegate authority to admit to dedicated MAPU and general medicine inpatient beds. Orientation of all staff to the service goals and targets. Journey boards with visual system to highlight patient-care needs, specific tasks and timeframes and escalation needed. Consultant-led teams; minimum daily ward rounds with senior staff input; medical, nursing and allied heath. Strict management protocols to govern use of beds, maximum length of stay and admission decisions. Tailor staffing and mix to meet predicted patient needs such as allied health staff, medical cover to ensure decisions are made and discharges happen seven days a week. Resources matched to demand (for example rostered staff, monitored beds, match training to service needs). Pool and share resources across services (for example consultant geriatrician across MAPU, in-reach, HITH).

25 http://www.health.vic.gov.au/emergency/obs09.pdf

26 Scott I et Al. 2009 'Effectiveness of acute medical units in hospitals: a systematic review', *International Journal of Qualitative Health Care*, vol. 21 no. 6, pp. 397–407. Henley J et al. 2006, *Standards for medical assessment and planning units in public and private hospitals: position statement of the Internal Medicine Society of Australia and New Zealand*, http://www.imsanz.org.au/resources/documents/IMSANZ_MAPU.pdf.

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2.4 Monitor and match capacity and demand, including electronic tools	
Description	Demand and capacity analysis allows sound understanding of patient flows, case mix and volume.
Evidence and examples	ED throughput is improved by active bed management.[31] Capacity simulation software.[32] Electronic bed board providing real time status and display. Historical data is used to predict trends, peak demand times and allocate resources to match, plan flexible options to modify services offered at times of increased or reduced demand. Integrated bed management systems to rapidly identify and allocate free beds – right patient in right bed across the health service/health care networks • Southern Health • Barwon Health • Western Health
Benefits	Supports rapid and consistent decisions about resource allocation to optimise overall flow and meet the clinical needs of individual patients. Balance workloads across inpatient units and medical teams. Balance demands of emergency and elective activity.
Risks	Tools must suit the local context. Unexpected peaks or troughs in activity and demand. Staff engagement and training in using tools. High costs of IT systems, hence likely moderate return on investment. Must understand business to avoid selecting wrong tools.
Success factors	Balance elective and emergency activity during periods of forecasted seasonal increase in demand for emergency medical inpatient activity (for example in winter). Use trend data to predict demand and capacity and plan resources to meet expected variations. Electronic tools are accessible to all staff. Schedule all internal patient transfers and discharges. This then allows synchronisation of transfers and staff workload.[33] Workforce changes to match demands: • change staff shift patterns to match predicted demand patterns, for example afternoons; weekends, seasonal (winter) • review intern registrar rosters to improve continuity of care, especially on weekends • extended hours and weekend support, for example diagnostics, multidisciplinary teams, care coordination for complex care and discharge over the weekend.

27 Li JY et al. 2010, 'Outcomes of establishing an acute assessment unit in the general medical service of a tertiary teaching hospital', Medical Journal of Australia, vol. 192 no. 7, pp. 384–87
28 St Noble VJ et al. 2008, 'Improving continuity of care in an acute medical unit: initial outcomes', *Quarterly Journal of Medicine*, vol. 101 no. 7, pp. 529–33.
29 Lambert L 2006, 'The consultant physician and the acute medical assessment unit', *Clinical Medicine*, vol. 6 no. 3, pp. 234–35.
30 Moore S et al. 2006, 'Impact of specialist care on clinical outcomes for medical emergencies', *Clinical Medicine*, vol. 6 no. 3, pp. 286–93.
31 Howell E et al. 2008, 'Active bed management by hospitalists and emergency department throughput.' *Annals of Internal Medicine*, vol. 149 no. 11, pp. 804–11.
32 Examples include CapPlan at www.emendo.co.nz or Horizon Enterprise visibility at www.mckesson.com
33 www.ihi.org/IHI/Topics/Flow/PatientFlow/Changes/ScheduletheDischarge.htm

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2.5 Tools to assist communication between clinicians within acute care	
Description	Tools to improve communication about patient care between clinicians within the acute setting.
Evidence and examples	Whiteboards/visual journey boards to monitor progress and facilitate referrals to reduce length of stay and risk of post-discharge problems.[34, 35, 36] Electronic whiteboards.[37] Standard envelope for communication between nursing home and hospital.[38] Clinical handover tools adapted to suit local context (for example SBAR, ISOBAR).[39] SCTT suite of templates to facilitate and support service coordination.[40] • Barwon Health: electronic whiteboards • Western Health: visual alert system • Alfred Health: multidisciplinary electronic care records
Benefits	Effective communication between clinicians within the clinical area supports patient safety and patient flow. Improved communication with primary care and community care providers can increase patient safety, smooth the transition home and decrease unplanned readmissions.
Risks	Inconsistent or variable applications. Electronic systems can be costly. Staff engagement and training. Compatibility with local IT systems.
Success factors	Integrated IT tools and support. Establish transfer agreements with other hospitals and other care agencies. Use colour-coded message boards to identify how long each patient has been in the ward or ED, progress of care from multidisciplinary team and initiate appropriate escalation responses. Whiteboards are updated and referred to several times each day as an integral part of multidisciplinary rounds.[41]

34 Chaboyer W et al. 2009 'Whiteboards: one tool to improve patient flow', *Medical Journal of Australia*, vol. 190 no. 11, pp. S137–40.
35 Aronsky D et al. 2008, 'Supporting patient care in the emergency department with a computerized whiteboard system', *Journal of the American Medical Informatics Association*, vol. 15 no. 2, pp. 184–94.
36 Wallis M et al. 2008, *Standard operating protocols for implementing whiteboards to assist with multidisciplinary communication on medical units*, Australian Commission on Quality and Safety in Health Care, Canberra.
37 Wong HJ et al. 2009, 'Electronic inpatient whiteboards: improving multidisciplinary communication and coordination of care', *International Journal of Medical Informatics*, vol. 78 no. 4 pp. 239–47.
38 Belfrage MK et al. 2009, 'Pushing the envelope: clinical handover from the aged-care home to the emergency department', *Medical Journal of Australia*, vol. 190 no. 11 (Supplement), pp. S117–20.
39 Australian Commission on Safety and Quality in Healthcare www.safetyandquality.gov.au
40 http://www.health.vic.gov.au/pcps/coordination/sctt2009.htm
41 Chaboyer W et al. 2009, 'Whiteboards: one tool to improve patient flow', *Medical Journal of Australia*, vol. 190 no. 11 (Supplement), pp. S137–40.

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2.6 Multi-disciplinary ward rounds	
Description	Members of each discipline in the clinical workforce caring for a patient come together within a multi-disciplinary environment to offer expertise and coordinate patient care. Includes primary caregiver and other key team roles and support services.
Evidence and examples	Decreases costs, patient harm and readmission.[42] Up to 42 per cent improvement in access, reduced length of stay, outliers and exit block once medical care completed on medical ward.[43] Practice-based interprofessional collaboration interventions can improve healthcare processes and outcomes.[44] Multidisciplinary inpatient care provides sustainable efficiency gains for the hospital and improved patient outcomes.[45] • Southern Health: Monash Medical Centre and Dandenong Hospital • Barwon Health
Benefits	Increased patient and carer satisfaction. Effective planning and evaluating treatment. Reduce delay and duplication between disciplines. Resources targeted to those with greatest potential.
Risks	Engagement and leadership of senior clinicians. Significant culture change required. Time and resource consuming if not well structured and targeted. Allied health management structure, for example ward based versus central allocation.
Success factors	Identify and target patients that will benefit most from multidisciplinary ward rounds, for example critical care, high risk, complex discharge. Daily multi-disciplinary ward rounds are supplemented by focussed discharge rounds late in the day. Time multidisciplinary rounds to allow sufficient time for planning same and/or next day discharges. Accurate and complete notes are documented and approved by the supervising doctor within a specified timeframe. Sub-acute staff participate in ward rounds and discharge planning. Frequent/regular review of long stay patient plans, for example senior executive, escalation. Whiteboards are an integral part of multidisciplinary rounds.[46]

42 Improvement map-multidisciplinary rounding at www.ihi.org.au
43 Boyle MJ 2007, *Multidisciplinary daily decision making ward rounds*, ARCHI.
44 Zwarenstein M, Goldman J, Reeves S 2009, 'Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes'. *Cochrane Database Systematic Reviews*, vol. 3, p. CD000072.
45 Mudge A et al. 2006, 'Controlled trial of multidisciplinary care teams for acutely ill medical inpatients: enhanced multidisciplinary care'. *International Medical Journal*, vol. 36 no. 9, pp. 558–63.
46 Chaboyer W et al. 2009, 'Whiteboards: one tool to improve patient flow', *Medical Journal of Australia*, vol. 190 no. 11 (Supplement), pp. S137–40.

3. Effective discharge

Guiding principles:

- **Person and family-centred care is coordinated, integrated and continuous across the patient journey.**
- **Collaboration across internal and external service provision (e.g. community, GP).**
- **Avoid prolonged stays and unplanned readmission by moving patients directly home or to a more suitable care location in a timely and supported manner.**
- **Freeing up the end of the acute hospital process enables flow through the system as a whole.**

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3.1 Deliver ongoing acute care outside the acute hospital	
Description	Enable people to receive acute care in an alternative environment to the acute inpatient setting.
Evidence and examples	Use day medical treatment centres or day hospitals for non-admitted acute care. Substitutive and out of hours HITH services (for example in patient's home or usual residence, residential care, sub-acute setting) can lower costs and improve outcomes, particularly in older patients and some with chronic disease.[47] GP liaison to facilitate discharge back to GP.[48] In-reach service to deliver care in residential care or home, in collaboration with HITH, GP, post-acute care (PAC), reduces readmission rates in chronic disease patients.[49] Jointly funded Commonwealth/state transition care and restorative care provides older people with appropriate care when acute hospital care is completed.[50] Acute care in geriatric evaluation management (GEM). Pilot sites provide access to a limited range of acute services for sub-acute inpatients in GEM at: • Alfred Health, Austin Health, St Vincent's Health
Benefits	Meet acute as well as restorative/functional status needs. Deliver care in the service best suited to dominant care needs. Avoid unnecessary use of ED or acute beds for patients with combination of low level acute and sub-acute care needs. Builds staff capability in sub-acute setting.
Risks	Limited range of acute services or unable to access service 24/7. Build on existing services to reduce costs. Timely discharge from services.
Success factors	Services delivered in acute GEM services. Pool or share resources across similar services, for example HITH and RACF in reach. Pathways for direct access to HITH from ED. Build on existing services, for example HARP, HITH and ED, to develop and trial models to keep people in own residences.

47 Frick KD et al. 2009, 'Substitutive Hospital at Home for older persons: effects on costs', *American Journal of Managed Care*, vol. 15 no. 1, pp. 49–56.
48 http://www.health.vic.gov.au/emergency/models.htm#gp
49 Lawlor M et al. 2009, 'Early discharge care with ongoing follow-up support may reduce hospital readmissions in COPD', *International Journal of Chronic Obstructive Pulmonary Disorder*, vol. 4, pp. 55–60.
50 http://www.health.vic.gov.au/older/

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3.2 Case manage discharge support for high risk discharges and repeat attenders	
Description	A preventative model of care, targeting complex patients and high users of the public hospital system, which aims to provide more coordinated care between hospital and primary care by case management across settings for acute and chronic care.
Evidence and examples	Some patients are difficult to discharge. A specialist team can craft customised solutions to meet the individual needs of these patients. Patients readmitted to medical services have often declined a variety of management interventions and have a high rate of non-compliance with recommended self-management activities.[51] Individually tailored discharge plans can reduce length of stay and readmission for complex patients.[52] Individual programs and long-term telephone follow up are effective for older adults at risk of hospital readmission.[53] A package of discharge services can reduce hospital utilisation within 30 days of discharge.[54] • HARP-CDM services target high risk patients.[55]
Benefits	Frequent ED attendees more appropriately case managed in primary care are identified early. ED and inpatient units work with primary and community care service providers to coordinate the patient's care.
Risks	Workforce: recruiting staff with skills across care settings. Tools for effective communication and collaboration across settings.
Success factors	ED and acute inpatient care coordinators/case management targeted for complex patients. Direct referral for some chronic care or aged care patients from their GP to a specialist hospital or community team. Set up processes and criteria for appropriate direct referral and admission. Advance planning and care directives to avoid unnecessary hospitalisation. Support GPs, provide them with contact details to enact plans. Specialist nursing consultants who work within a multi-disciplinary team to manage patients across the acute-community interface.

51 Whitehall C et al. 2009, 'Re-admissions to general medicine at an acute public hospital: a comprehensive patient analysis', *5th Australian Redesigning Health Care Summit*, Queensland Health, Brisbane.
52 Sheppard S et al. 2010, 'Discharge planning from hospital to home', *Cochrane Database Systematic Reviews*, no. 1, p. CD000313.
53 Courtney M et al. 2009, 'Fewer emergency readmissions and better quality of life for older adults at risk of hospital readmission: a randomized controlled trial to determine the effectiveness of a 24-week exercise and telephone follow-up program', *Journal of the American Geriatric Society*, vol. 57 no. 3, pp 395–402.
54 Jack BW et al. 2009, 'A reengineered hospital discharge program to decrease rehospitalization: a randomized trial', *Annals of Internal Medicine*, vol. 150 no. 3, pp. 178–87.
55 http://www.health.vic.gov.au/harp-cdm/

3.3 Use standard discharge criteria for common conditions	
Description	Consensus on a standard process and criteria for discharge.
Evidence and examples	Criteria-led discharge from high dependency can improve bed utilisation.[56] Use standard ready for discharge criteria. Discharge criteria and process for people living in residential care who are often hospitalised because of acute illness but most often do not require prolonged hospitalisation.[57] • Barwon Health
Benefits	Discharge patients when they are medically stable and ready. Reduce variations in discharge processes and times. Improve acute bed availability. Avoid unnecessary delays due to lack of medical cover.
Risks	Unnecessary increase in length of stay. Delegation of responsibility. Staff engagement and compliance.
Success factors	Use either a discharge checklist, or document in the patient's progress notes, a list of conditions to be met and treatment to be completed prior to discharge. Standard discharge criteria used for high volume patients. Audit and review compliance. Seek accountability for compliance. Training for staff in the use of the criteria. Link with primary care and post-acute support services after discharge.

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56 Knight G 2003, 'Nurse-led discharge from high dependency unit', *Nursing in Critical Care*, vol. 8 no. 2, pp. 56–61.
57 Finucane P et al. 2000, 'Use of in-patient hospital beds by people living in residential care', *Gerontology*, vol. 46 no. 3, pp. 133–8.

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3.4 Tools to assist communication with out of acute hospital settings	
Description	Handover policy to support the continuum of patient care across care settings. It includes a process and minimum information to be conveyed between clinicians when a patient departs the acute care setting and transitions to care in another location.
Evidence and examples	The following strategies have proven to be effective in improving the flow of information out of the acute care setting:[58] A legible accurate handover summary includes reasons for changes in ongoing treatment such as medication dosage. Electronic handover summaries or DOCFAX (with consent) allow for rapid disposition of handover summaries to avoid delay in their mailing. Generic transfer/discharge to hospital from for all RACF, for example transfer-to-hospital envelope.[59] • *Human services directory* [60] provides access to accurate and up-to-date information about health, social and disability services in Victoria. • Eastern Health
Benefits	Minimise risk associated with transfer of patient care out of the acute hospital. Improve continuity of care across care types and settings.
Risks	Consent and maintaining privacy of patient information. Delay or loss of information between services.
Success factors	Obtain GP contact details from patient at admission and GP contact details held on central and updated database. Informed consent for collection, use and disclosure of health information obtained on arrival in the ED. Clear delineation of staff roles and responsibility for communication with GPs and community services. Standards for written handover summaries. Educate hospital doctors on the importance of timely handover summaries through induction and regular feedback, especially in the discharge planning meetings. Clerical support to standardise the settings on fax machines with quick dial GP numbers. Audit the number of patients who are discharged without a handover summary: patient's GP receives timely summary. Meet with nursing directors from surrounding RACF and negotiate agreement on common processes and handover documentation for transfer and discharge of nursing home patients. Timely (same or next day) handover communication to GPs by electronic transfer of handover summary including relevant investigation/procedure results.

58 See http://www.nehta.gov.au/e-communications-in-practice/edischarge-summaries
59 Belfrage MK et al. 2009, 'Pushing the envelope: clinical handover from the aged-care home to the emergency department', *Medical Journal of Australia*, vol. 190 no. 11 (Supplement), pp. S117–20.
60 http://humanservicesdirectory.vic.gov.au/

3.5 Discharge planning	
Description	A coordinated program developed to ensure that each inpatient has a plan in place for needed continuing or follow-up care after discharge from the acute hospital.
Evidence and examples	Clinicians can usually predict patients to be discharged at least one day in advance with more than 80 per cent accuracy, discharge predictions for the day after are less accurate, and so on.[61] Predicting in advance the number of days to discharge provides a greater focus on the discharge process, supports more effective completion of tasks and management of total bed stock. A structured discharge plan tailored to the individual patient can bring about small reductions in hospital length of stay and readmission rates for older people admitted to hospital with a medical condition.[62] • Barwon Health: weekend discharge round and handover • Southern Health Dandenong: patient journey boards
Benefits	Reduce hospital inpatient length of stay. Reduce unplanned readmission to hospital. Improve the coordination of services following discharge from hospital. Reduce risks associated with prolonged hospitalisation of older people. Allows planned synchronisation of follow-on care (such as from an intensive care unit to a patient care unit and between wards) once a discharge schedule is in place.
Risks	Miscommunication between disciplines and care settings.
Success Factors	Medical staff are responsible for setting days to discharge and the multidisciplinary team works to meet this deadline. Anticipate and plan for discharge from the time of admission. Count down the days and match to set tasks at the daily ward round. Visual communication (for example whiteboard) to display estimated discharge, tasks and progress. Ensure aged care assessments are completed early to plan move when the patient is medically ready for discharge. Schedule the set series of tasks that must occur at an organisational and unit level prior to a patient discharge.[63] Agreed suitability criteria across care settings. Aged care assessment team assessments commence as early in a patient's stay in hospital as is possible. Incorporate advance care directives to avoid unnecessary hospitalisation.

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61 See discharge planning tools at Institute for Healthcare Improvement at www.ihi.org
62 Sheppard S et al. 2010, 'Discharge planning from hospital to home', *Cochrane Database Systematic Reviews*, no. 1, p. CD000313
63 See 'Optimizing patient flow: moving patients smoothly through acute care settings', www.ihi.org

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3.6 Timely departure from acute beds	
Description	Strategies to match acute bed availability to demand in order to accommodate the differences in patient arrivals and discharges during the day.
Evidence and examples	Discharge or transit lounges space away from acute bed for patient to wait on day of discharge. Flexible admission and discharge beds during peak demand times to take patients directly from ED while awaiting discharge of patients from standard beds. • Alfred Health: flexible beds • Bendigo Health: discharge lounge • Southern Health: transit lounge • Melbourne Health: discharge lounge • Western Health: volunteers
Benefits	Avoid using acute beds when there are no further acute care needs. Deliver patient-centred service by accommodating individual needs regarding departure time.
Risks	Unable to close beds at the predetermined time if patients are not discharged as expected. Can end up as high cost permanent beds; need a clear strategy. Access to workforce required to open beds. Multiple patient moves can contribute to miscommunication and information loss with each added step.
Success factors	Use strategic placement and escalation strategy to ensure flexible beds are closed at predetermined times. Stagger discharge times to match patterns in demand for acute beds. Use discharge patterns to select wards for flexible beds.

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3.7 Minimise functional decline for at risk people across the care episode	
Description	Strategies that prevent or minimise the risk of functional decline of at risk.
Evidence and examples	Best care for older people everywhere toolkit.[64] • Barwon Health • Peninsula Health • Southern Health
Benefits	Minimise risks associated with acute hospitalisation of the older person, for example deconditioning. Support early discharge. Reduce the risk of over-converting frail aged into candidates for long-term care.
Risks	Unrealistic goals that hold up discharge.
Success factors	Standard risk screening and risk assessment tools. Sub-acute support for functional maintenance in acute inpatient settings. Move patient from acute setting as soon as acute needs are met. Multidisciplinary assessment and management. Adaptation of activities to the local context.

64 http://www.health.vic.gov.au/older/toolkit/index.htm?OpenDocument

Principles for successful change

Understand the problem and its context

Hospitals are complex and change is difficult. It is important to understand why a problem exists and the local factors that influence the problem before proceeding to fix it. Solutions must be tailored to suit local context and needs. The Redesigning Hospital Care Program supports health system improvements through applying process redesign methodologies in Victorian public hospitals. These methodologies provide a systematic approach to analyse and improve the processes for managing patients with the aim to increase efficiency and quality of care. The *Introduction to redesign* booklet provides additional information on the redesign process.[65]

Issues that can be addressed to improve processes in healthcare include:

- delays, such as patients waiting for tests
- reworking – duplication of assessments
- overproduction, such as unnecessary tests
- unnecessary movement of people
- 'defects', such as medication errors, adverse events, avoidable readmission
- waste of spirit and skill, through the daily hassles experienced by staff not being addressed.

Data and measurement

Measurement is essential to fully understand problems. Data is vital to identify and prioritise the focus for improvement. Baseline data helps assess the impact of an intervention and if improvement is sustained.

Improve service access and reliability

Reliable systems reduce the risk of error and harm and deliver consistently high standards of care. Reducing variability can improve the reliability of health systems. There are three sources of variability in hospitals: clinical (number of patients), flow (over hours and days) and clinician (individual practices).

Demand, capacity and flow

Demand for acute medical services fluctuates over 24 hours and seven days. A detailed understanding of demand, capacity, resources and flow is needed for service improvement. Measurement of demand (the number of patients requiring access to the service) and the flow (when the service is needed) will help identify if there is a capacity or resource shortfall. Delays in access to services can contribute to queues, congestion and variability in service access. Workforce is a key factor to be considered in matching capacity to demand.

Engagement and leadership

The way in which a change is introduced predicts success.[66] Factors contributing to success include leadership, stakeholder engagement (particularly of clinicians) and patient participation. Due to the interactive nature of health services, supportive and actively engaged senior management is vital to achieving improvement. Clinical leadership and an understanding from all staff of what is trying to be achieved and how their actions contribute to the achievement are also key components of improvement.

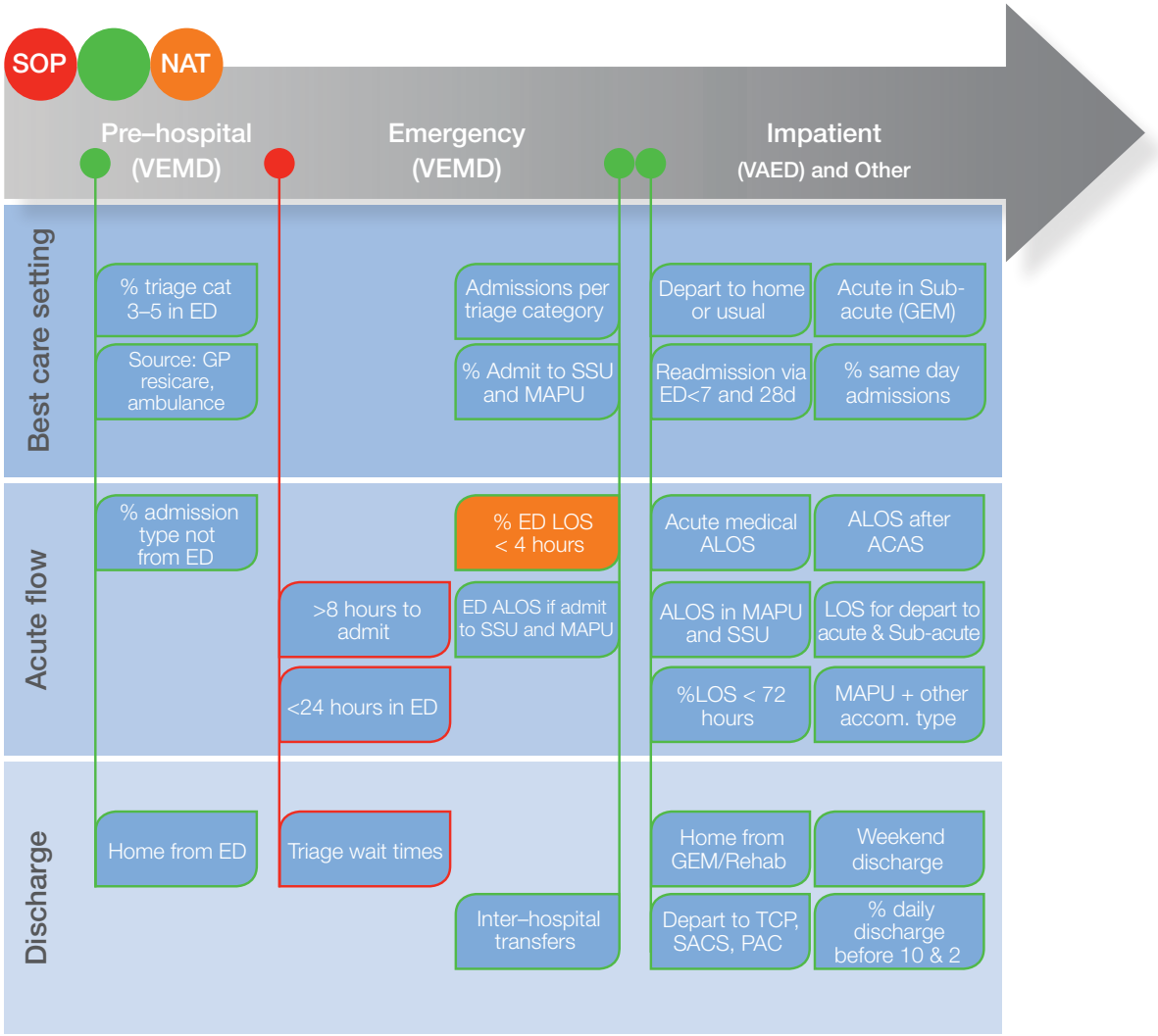
Involve all key stakeholders as active collaborators in the process and solution seeking. Patients often view services differently from clinicians and managers, and what they view as a 'problem' or important may be surprising, hence they have a significant role to play in both designing and monitoring service improvements to determine if they have the desired impact.

65 See www.health.vic.gov.au/redesigningcare/

66 Yuan CT et al. 2010, *Blueprint for the dissemination of evidence-based practices in health care*, The Commonwealth Fund, New York.

Outcomes and measures

This section provides guidance about possible measures that may be useful to monitor progress and outcomes of improvement initiatives in acute medical services. The Redesigning Hospital Care Program publication *Emergency department redesign measures* provides a useful guide to assist selection of potential measures.[67]



67 See www.health.vic.gov.au/redesigningcare/

Strategic priority	Issue	Proposed measure
Treat in the most appropriate care setting: alternatives to ED or inpatient care	Most effective use of resources	Triage cat in 3–5 (%)
		Source of referrals (number)
		Same day admissions (%)
		Admitted to SSU (%)
		Admitted to MAPU (%)
	Access to appropriate treatment	Sub-acute (level 1) (number)
	Treatment has desired outcome	Depart to home or usual accommodation: ED and inpatient (%)
		Readmission via ED < 7 and 28 days (number)
Acute flow	Most effective use of resources	Admission type not from ED (%)
		Acute medical LOS in days(%)
		LOS after ACAS (days)
		LOS before depart to acute or sub-acute (days)
		MAPU + another accom. type (%)
	Ability to obtain healthcare at the right time	Exceeds triage wait time (%)
	Access to appropriate treatment	ED LOS>4 hours (%)
		>8 hours in the ED (%)
		>24 hours in the ED (number)
		Compliance with pathways or clinical indicators (%)
	Treatment has desired outcome	LOS in SSU (hours) & home <24 hrs (%)
		LOS in MAPU (hours) & home <48 hrs (%)
		Departure destinations (%)
		Admissions with LOS <72 hours (%)
	Achieving desired results with most effective use of resources	Admissions per triage category (%)
		Patient experience: VPSM, ED-VPSM & comment
Effective discharge	Treatment has desired outcome	Home from GEM/rehab (%)
	Most effective use of resources	Weekend discharge (%)
		Discharges at peak demand times over the day (%)
		Depart to TCP, SACS, PAC (number per quarter, %)

Dos and don'ts

Dos

Develop an agreed organisational strategy with output goals that are reported on a regular basis, underpinned by a collective understanding of how you think change can be stimulated and embedded.

Ensure that the whole of the patient's journey has been considered, including those parts outside local or your own responsibility.

Have clarity about the measures used to assess performance and quality, and for what those measures are useful for. This must include:

- measures for accountability
- measures for comparability
- benchmarking.

Agree what balance you want to achieve between investment in quality assurance, quality improvement capability and capacity.

Bring safety and quality alive through patient stories – in person or on video – and by making safety the first item on the agenda.

Make sure that non-executive directors and executives are actively involved and demonstrate their support.

Plan for sustainability and spread.

Embed quality in cost improvement initiatives, ensuring that cost improvement programmes do not damage quality, but also not claiming that quality improvement will solve all the financial problems.

Be strategic in determining the balance between elective and emergency activity during periods when a seasonal increase in demand for emergency medical inpatient activity can be accurately forecasted.

Treat patients in order, avoid jumping the queue for non-clinical reasons.

Don'ts

Run a series of one-off, disconnected improvement projects.

Allow the project to concentrate narrowly on those parts of the process for which the organisation is paid.

Use a narrow focus on measures for performance, leaving clinicians to deal with quality and clinical benchmarking, and doing no measurement for improvement.

Have a confusing myriad of disconnected measures and rely on the judgement of others to assess performance.

Employ an army of quality assurance staff, which could lead to complacency among clinical staff.

Bury data and information in lots of other matters.

Think it is sufficient for non-executives to have a presence if it is unorganised and learning is limited.

Over-rely on individuals: if they move on, the momentum dies.

Enable quality and cost-improvement programmes to run in silos.

Avoid making the system too complex as unclear responsibility and/or accountability impede decisions/discharges.

Avoid active treatment at triage as this can add to delay by creating additional queues and blockages to flow.[68, 69]

68 Lyons M, Brown R, Wears R 2007, 'Factors that affect the flow of patients through triage', *Emergency Medicine Journal*, vol. 24 no. 2, pp. 78–85.

69 Mason S et al. 2006, 'What are the organisational factors that influence waiting times in Emergency Departments?', *Report for the National Co-ordinating Centre for NHS Service Delivery and Organisational R&D*, Health Services Research Section, University of Sheffield, Sheffield.

Appendix 1: Acute Medical Inpatient Advisory Committee

Title	Name	Surname	Committee position	Organisation
Mr.	Andrew	Way	Chair	Alfred Health
A/Prof.	Harvey	Newnham	Physician (General Medicine)	Alfred Health
Dr	Fergus	Kerr	Physician (Emergency)	Austin Health
A/Prof.	Andrew	Hughes	Physician (General Medicine & Regional Health Service)	Barwon Health
Ms	Donna	Sherringham	Hospital Executive Nurse (Regional Health Service)	Bendigo Health
Dr	Howard	Connor	Physician (Rural Health)	Central Gippsland Health Service
Ms	Phillippa	Blencowe	Nurse	Eastern Health
Dr	Geoff	Broomhall	General Practitioner (Primary Care)	GPV
A/Prof.	Tony	Snell	Physician (General Medicine and Acute Aged Care)	Melbourne Health
Ms	Robynne	Cooke	Hospital Executive	Northern Health
Prof.	Don	Campbell	Physician (General Medicine)	Southern Health
Ms	Belinda	Carey	Allied Health	St Vincent's Health
Prof.	Edward	Janus	Physician (General Medicine)	Western Health
Attended by:				
Mr	Terry	Symonds	Acute Programs	Department of Health
Dr	Bernice	Redley	Medical Inpatients	Department of Health
Ms	Nicole	Doran	Sub-Acute Services	Department of Health