MINISTRY OF HEALTH
MANATŪ HAUORA

Top Tips for Improving Your Acute Demand Management

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Chapter 1: Introduction

Overview

The two main objectives of this document are to:

- describe what we mean by managing acute demand in a New Zealand context, and who the key stakeholders are in New Zealand's acute care system
- provide a helpful toolkit for managing acute demand, with some top tips on how to implement specific models of care that have been proven to improve acute patient flow.

The document is relevant to a wide range of health professionals and groups, including alliance leadership teams, service-level alliances, executive leaders, service managers, change managers and clinicians, across a wide range of health services, including general practice, ambulance services, allied health, after-hours services, emergency departments and hospital services. It is designed to help its readers identify gaps in their local acute service delivery and to give top tips on how to change models of care to those teams, departments and organisations wanting to do so.

This document should be read in the context of some of the other changes happening within the health system, which it does not discuss explicitly. For more information about the changes, see:

- New Zealand Health Strategy: Roadmap of Actions 2016
- Healthy Ageing Strategy
- Pharmacy Action Plan 2016 to 2020
- Palliative Care Action Plan

The Acute Demand Toolkit is intended to be a living document. Feedback or initiatives that are working well in your district can be sent to **acutetips@moh.govt.nz**. This email will be actively managed and feedback will incorporated into updated versions of the Acute Demand Toolkit every six months.

Acute care in New Zealand

Acute care is loosely defined as any urgent or unplanned health care that a person receives for an illness or injury. Acute care is usually time-sensitive, and can result in death or long-term disability if the person does not receive the care they need in a timely manner.

General practitioners (GPs) used to provide most of the after-hours care until the 1970s and 1980s in New Zealand, with emergencies going to emergency departments (EDs). In the 1980s New Zealand EDs saw an estimated 1–2% of the GP workload and GPs could have managed an estimated 10% of ED presentations (Allen and Reinken 1984). Urgent care clinics, originally known as deputising services, have steadily risen in number and popularity since they began in the 1970s to the point that New Zealanders now make 2.5 million urgent care visits a year. This compares with around 1 million ED visits, of which 5–25% are 'minor' (with the exact percentage depending on where you are in New Zealand). If 250,000 ED visits are minor, then ED visits make up less than 10% of all urgent care visits for minor illness or injury in New Zealand.

New Zealand has the lowest number of ED presentations per person in the developed world. This achievement should be acknowledged to give the discussion in this document some context.

As in other developed countries, the demands on New Zealand's acute care services are growing, thanks in part to our growing and ageing population and the proliferation of long-term conditions like cardiovascular disease and diabetes. In addition, our workforce will continue to be stretched as many GPs and nurses retire over the next 10 years.

In the last five years:

- GP consultations have increased by 10%
- Nurse consultations in primary care have increased by 31%
- calls to ambulance services have increased by 4%
- emergency department presentations have increased by 37,450

The demands on our acute care system are projected to increase even further over the next 10 years, which is why it is important that acute care services identify new ways of working that they can use to manage these greater demands effectively. We need to proactively look at options for strengthening our ability to manage acute demand on the system and for delivering more planned care in the community rather than unplanned care in hospitals. Delivery of unplanned care can be managed in a range of appropriate settings through various integrated settings. We can only achieve this by having a system-wide, coordinated and engaged workforce and by using mechanisms that improve the ability of patients and their families and whānau to manage their long-term conditions successfully in the community.

Nature of urgent and unplanned care

1. People generally manage their own health through self-diagnosis and care, supported by people around them, and by using publicly available health and disability information resources when they need to.
2. People require specialist health and disability advice and health care[1] when their self-diagnosis and self-care are not demonstrably achieving an acceptable outcome to them or their health caregiver(s). These services are delivered in two main ways.
   (a) Urgent and unplanned care services provide patients with triage or assessment, advice and definitive health care within the first 24 hours.[2]
   (b) Planned or elective services book patients into advice, diagnostic, treatment, rehabilitation or maintenance services more than 24 hours after an initial assessment or triage.[3]
3. People access specialist health and disability services through a process in which the services assess each individual's need, compare and weight that need against the needs of others, and then decide on service delivery based on the capacity of services to meet those needs relative to other people's needs.
4. It is essential that urgent and unplanned specialist health and disability services are well planned and managed, highly integrated, adequately resourced and regularly reviewed.
5. Key information on an event of urgent and unplanned care must be promptly provided to the patient and their primary health provider. Urgent and unplanned care systems must be able to access the patient information they need for triage, advice and definitive health care decisions.
6. Best patient outcomes happen when different 'clinical homes'[4] work together. The role of telehealth as a clinical home on the continuum of urgent and unplanned care in New Zealand is a key issue.

1 Primary health services are considered to be specialist health services.

2 No matter where people live or who provides the services, urgent and unplanned care services should consistently triage and provide appropriate advice and health care based on that triage. Patients should also face consistent pricing arrangements for the services they receive.

3 These services generally require patients to be accountable for meeting appointment times and arranging transport.

4 For example, primary health care, ED and ambulances

New Zealand's acute care system

New Zealand's acute care system is complex. There are many places where people can go when they are injured or unwell, and several different health services can be involved in a single episode of care. The key is knowing the right place to go and the right time to go there. For most people, this is not always immediately apparent and it is not usually their primary concern when they are sick or injured.

The goal of a good acute care system should be to:

- support people with an acute illness or injury to get the right care, at the right place and time
- ensure people receive services that are closer to home (ie, in the community) wherever possible
- move people smoothly through the various services or specialties involved in their patient journey
- manage the flow of patients through the system and back home again as safely and efficiently as possible
- triage once and ensure that information flows in real time with the patient
- inform the patient fully of treatment options and next steps at all times and undertake only necessary interventions. Choosing wisely should always be a consideration (see http://choosingwisely.org.nz for more information).

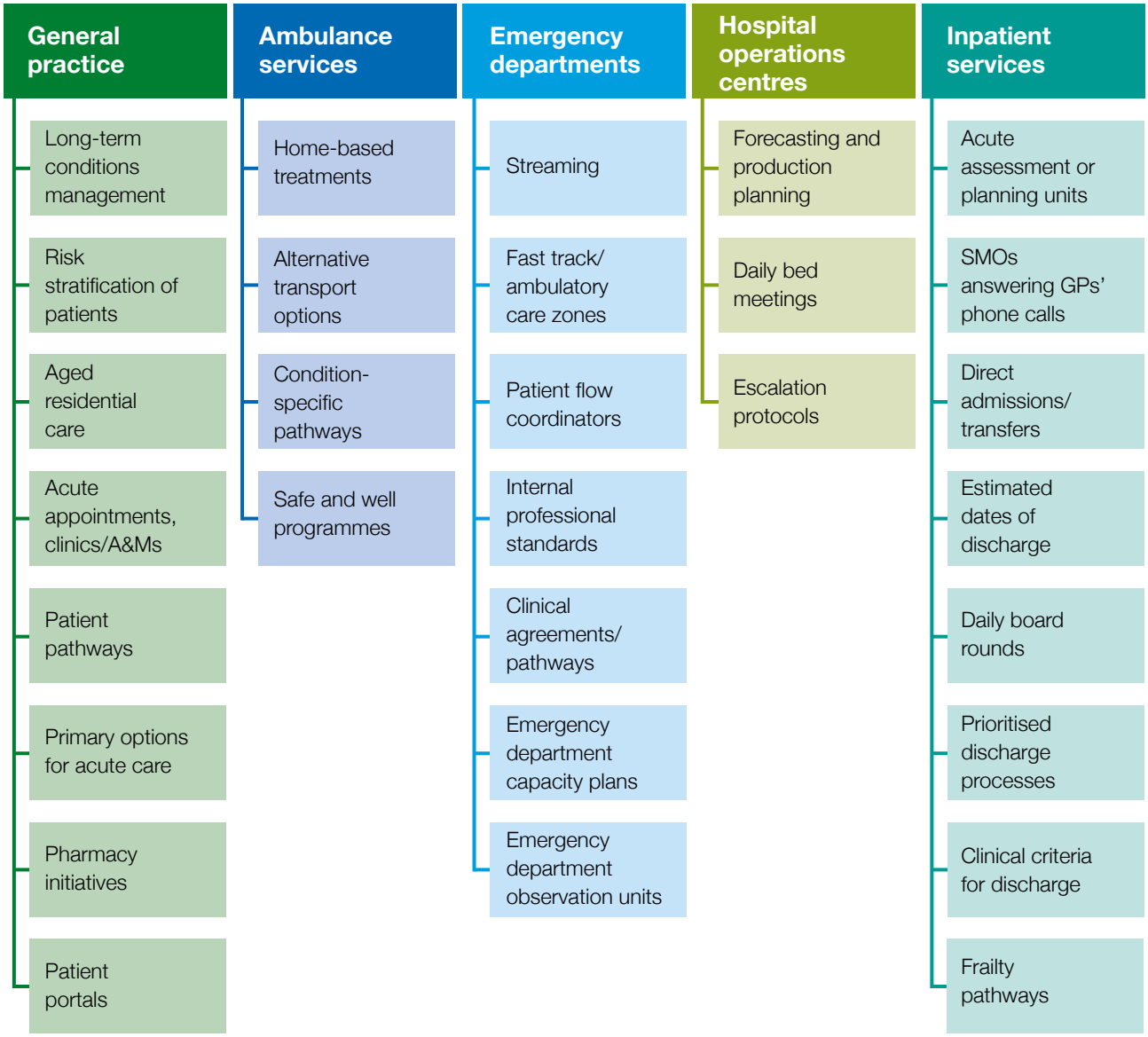
A framework for managing acute demand

For the acute care system to work effectively, the various services that make up the system need to be well integrated and have clear channels of communication. Each service also needs to be working at the top of its scope of practice, ideally seeing only those patients that need the level of care it can provide.

Most health care systems have in place or are in the process of establishing an acute demand network that includes representation from across the health sector. The key elements of such a network are: having a shared vision; working in partnership; and having clear governance and data to support decision-making.

Numerous models of care help to improve the integration between acute care services, or the flow within services. Figure 1 provides an overview of the models that this document covers. Although not an exhaustive list of all the models of care that you could implement, it highlights the range of actions and projects that can help to improve acute patient flow and safely manage patients in the right place at the right time. You will also note we have not included models of care for all of the services that are part of the acute care system. This is largely because the evidence base for acute models of care within these services is weaker than it is for models in general practice, ambulance services, emergency departments and hospitals.

Figure 1: Overview of programmes and models currently supporting acute demand



Notes: A&Ms = accident and medical centres; GPs = general practitioners; SMOs = senior medical officers.

For some of the models highlighted above, this document contains:

- a brief description of a range of projects that organisations have used to improve care
- key questions that you may wish to consider
- top tips for implementing the model based on what other organisations have learnt
- measures of success and key balancing metrics.

This information is by no means comprehensive, but we would like to continue to add to this content in future editions.

Key acute demand performance indicators

Although each model of care will have its own measures of success, there are two system-level measures that every district should monitor to gain an overall sense of how well its acute care system is performing and whether any changes it makes have been effective.

These two measures are the:

- system-level measure of acute hospital bed days
- health target of shorter stays in emergency departments.

Other population health indicators should form a part of the additional measures through the system-level measure process.

System-level measure: Acute hospital bed days

The system-level measure of acute hospital bed days establishes the use of acute services per person in secondary care that could be improved by:

- effective management in primary care
- transition between the community and hospital settings
- discharge planning
- community support services
- good communication between health care providers.

The measure is used to manage the demand for acute inpatient services on the health system. Its purpose is to reflect the level of integration between community, primary and secondary care services and to support the strategic goal of making the best use of health resources for planned care rather than acute care.

Health target: Shorter stays in emergency departments

To meet the health target of shorter stays in emergency departments, an emergency department must admit, discharge or transfer 95 percent of patients within six hours. Long stays in emergency departments are linked to overcrowding, which is associated with delays to care, longer hospital stays, decreased satisfaction, adverse outcomes and, most significantly, increased mortality. The underlying causes of emergency department overcrowding span the whole health system. One cause is access block – that is, an inability to admit emergency department patients to inpatient wards.

Further information

The following sections are a selection of national and international documents or presentations. Some have been provided by organisations as 'work in progress' and have kindly been shared to help other organisations.

This document has been produced in a relatively short time as a means of starting the process of sharing practice and tips. As it is intended as a living document, we would welcome any additions, suggestions, case studies and/or outcome measures that you have used within your organisation that may help others. You may also add and view documents at: http://ed.hiirc.org.nz/section/47989/acute-demand

The United Kingdom's agency NHS Improvement has also recently launched a document outlining many of the features of patient flow that are covered here. For more details, see:

- NHS Improvement (2017) *Good Practice Guide: Focus on improving patient flow* https://improvement.nhs.uk/uploads/documents/Patient_Flow_Guidance_2017_13_July_2017.pdf
- NHS Improvement (2016) *Rapid Improvement Guide to: Making internal professional standards work for you ('the way we do things here')* https://improvement.nhs.uk/uploads/documents/internal-professional-standards-RIG.pdf

Chapter 2: Acute demand in general practice

Introduction

This section provides information on the management of long-term conditions and the use of primary options for acute care. It also briefly discusses patient portals and telehealth. Important features it does not cover, which we aim to incorporate in future, are patient self-care and health literacy; access to acute and urgent slots in primary care; community pharmacy; Healthline; and the use of risk stratification.

It is important to recognise that if patients struggle to manage their conditions at home and have limited access to acute primary care appointments or a local accident and medical centre, then ED will be the chosen destination for both ambulances and patients.

Many districts have now established an alliance governance structure, which includes primary health organisations (PHOs), GPs and secondary care clinicians, planning and funding, ambulance and pharmacy in order to support pathways for patients that are alternatives to ED and admission. in addition, the system-level measure for acute bed days is strengthening the focus on bringing together all parts of the health care system to drive changes in primary care access; ambulance pathways; ED and hospital flow; discharge planning; frailty and long-term conditions management; and aged residential care.

Long-term conditions management

Supporting people to manage their long-term conditions becomes more important as the population ages and an increasing number of people are managing more than one condition. We can look at self-management support in two ways: as a portfolio of techniques and tools that help patients choose healthy behaviours; and as a fundamental transformation of the relationship between the patient and caregiver into a collaborative partnership.

Effective self-management can reduce the number of people who attend primary and secondary care.

- For more information, see the Ministry of Health's *Self-management Support for People with Long-term Conditions* (www.health.govt.nz/publication/self-management-support-people-long-term-conditions) (Ministry of Health 2016).
- For a comprehensive web resource targeting both clinicians and people with long-term conditions, see the Health Navigator website (www.healthnavigator.org.nz).
- See the *Long Term Conditions Outcome Framework* (https://nsfl.health.govt.nz/dhb-planning-package/long-term-conditions-outcomes-framework)

As the population ages and lifestyles change, the health system needs to respond to increasing numbers of people with long-term conditions. This will require changes in health care provision. Primary care and community health have key roles in preventing, detecting and managing long-term conditions and acute care needs to keep patients well and at home whenever possible.

To manage long-term conditions, we need to take an integrated approach that includes the patient and their family and whānau, the community, and primary and secondary care services. Primary care services should coordinate this approach, which involves:

- supporting self-care and patient activation
- care planning, including for acute exacerbations
- addressing mental health issues and psychosocial issues
- improving support for caregivers
- providing continuous services with the GP
- good communication
- using information effectively
- undertaking targeted health-literacy interventions, which can improve safety and satisfaction and reduce hospitalisation (DeWalt and McNeill 2013)
- coordinating care and identifying patients in greatest need of proactive, coordinated care (Reiss-Brennan et al 2016).

Other considerations – Mental health

Depression plays a significant role in hospital admissions for patients with long-term conditions. The following studies discuss:

- how depression is correlated with hospital admissions in people with a chronic physical illness (Guthrie et al 2016)
- how, in primary care patients with type 2 diabetes who screened positive for depression, investing more resources in collaborative care yielded the most cost-effective strategy (Johnson et al 2016)
- a qualitative evaluation of an integrated collaborative care model for managing depression in people with more than one condition (Knowles et al 2015).

National Health Care Homes

The revised New Zealand Health Strategy's themes of people powered, one team, closer to home and smart systems are important to reducing acute demand within hospital settings. The New Zealand Health Care Home Collaborative is now in operation throughout a number of health systems across New Zealand.

What is a Health Care Home?

Health Care Home is a model of care centred on a patient's needs. Under the model, patients can access same-day appointments, have extended hours of access and have virtual consultations with GPs via phone or secure messaging. They also have access to their clinical information through patient portals.

Multidisciplinary teams, including general practice teams, specialists and community nursing teams, support patients. This feature makes the model a key component of integrated health that will enable district health boards (DHBs) and primary care to work in partnership to achieve the best possible outcomes for patients and the wider community.

The model results in a more comprehensive and cohesive system of health care that is proactive, responsive and effective, with members of the general practice team able to provide the best possible care, support patients to have more control over their care and reduce health disparities.

What patients in a Health Care Home can expect

- **The practice to be a nice place to visit**, There should be a calm reception area where staff can focus completely on patient needs.
- **Easier access and more choice**. Patients have online access to book appointments, contact their GP or nurse, and view lab results and other clinical information. This saves them the time and hassle of travel. Patients can also phone or make an appointment in the usual way and may be able to speak directly to a GP.
- **Access to care when it is urgently needed**. If a patient phones a Health Care Home practice, they can get an appointment on the same day if it is clinically necessary. They may be able to speak directly to a GP about their care before making an appointment.
- **More services**. Health Care Home practices are expanding services so that patients can get additional urgent care (such as intravenous antibiotics and management of deep vein blood clots) and in this way avoid having to make unnecessary trips to the emergency department for such care.
- **Better management of ongoing health conditions**. Health Care Home practices will make it easier for the many patients who have ongoing health conditions to plan and manage their health care, and maintain a high quality of life. Practices will work with patients to set goals for their health and wellbeing, and work with them regularly to achieve these goals. Health Care Home practices make available the time patients need to manage conditions in partnership.
- **Better service at hospital or after hours**. Hospital and after-hours staff will be able to see patients' health information, which they can use to provide better and more personalised care.

For more information on Health Care Homes, see:
www.healthcarehome.org.nz/Contact-us

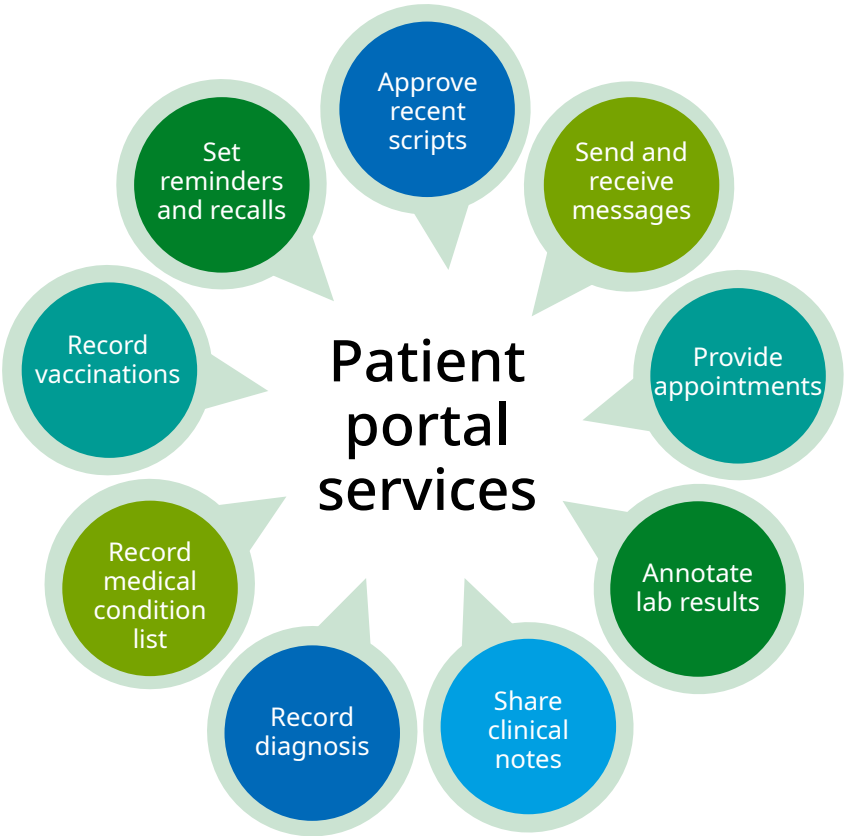
For examples of specific initiatives, see:

- Compass Health
  www.compasshealth.org.nz/PracticesandFees/HealthCareHomePractices.aspx
- Pinnacle Midlands Health Network
  www.healthcarehome.co.nz
- General Practice New Zealand
  http://gpnz.org.nz/wp-content/uploads/Health-Care-Home.pdf
- Northland DHB
  www.northlanddhb.org.nz/AboutUs/NorthlandHealthServicesPlan/NeighbourhoodHealthcareHomes.aspx

Patient portals and telehealth

Patient portals are secure online sites, provided by GPs, where patients can access their health information and interact with their general practice. As of January 2017, over 297,000 New Zealanders were using patient portals, and 445 practices offered them. Figure 2 summarises the features of patient portal services.

Figure 2: Features of patient portal services



For more information on patient portals, how to implement them and start-up guides, see www.health.govt.nz/our-work/ehealth/other-ehealth-initiatives/patient-portals

Telehealth

The National Telehealth Service, launched in November 2015, provides an integrated platform for people to access health information, advice and support from trained health professionals.

The purpose of the National Telehealth Service is to:

- deliver the right care at the right time by the right person in the right place
- reduce acute and unplanned care, improve self-care and assist with health literacy
- be integrated with local, regional and national health and injury services
- be adaptable and flexible so that it can develop over time to meet the changing needs of users and advancing technology
- enable additional services and government agencies to use its infrastructure and relationships, as they need to.

Figure 3 sets out the service's model in terms of how people engage with it and how it can be part of a seamless approach to public services. Figure 4 summarises its six key principles and shows how they flow through to the service's objectives, outputs and outcomes.

Figure 3: Model of the National Telehealth Service

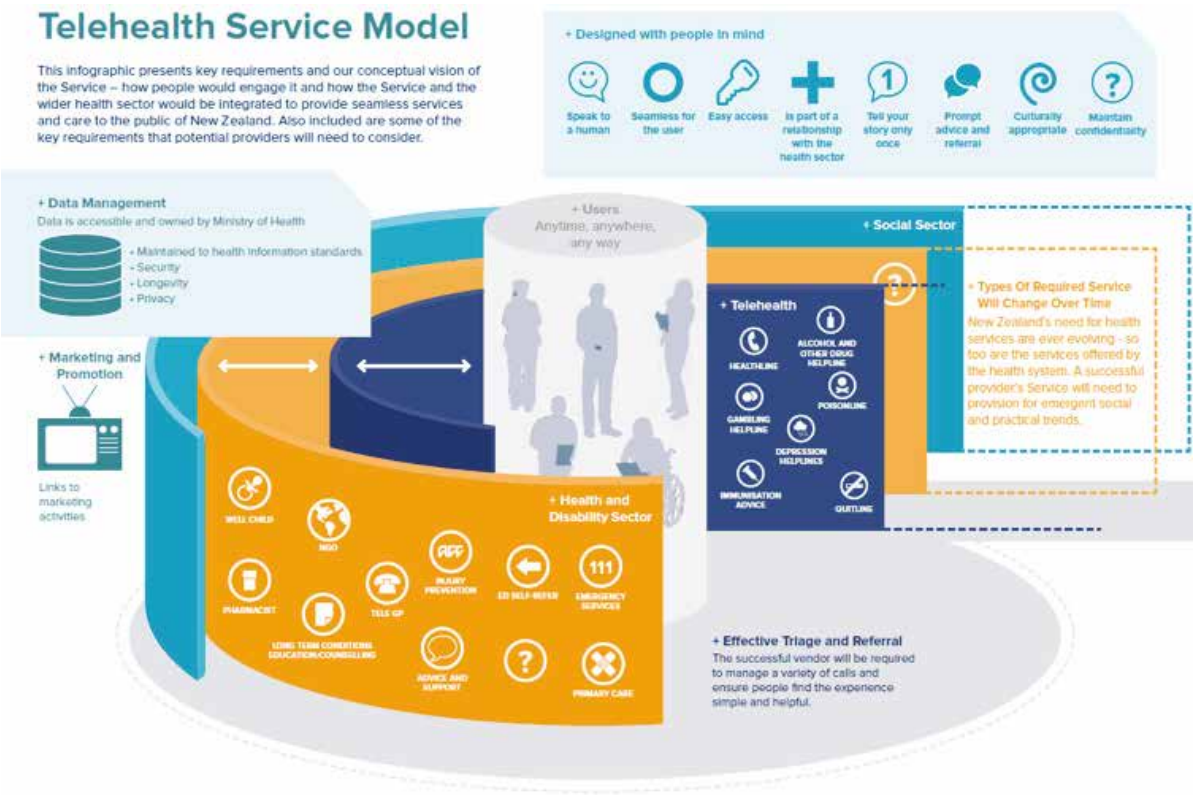


Figure 4: Principles, objectives, outputs and outcomes of the National Telehealth Service

The right thing to do is the easiest thing to do for users and providers

Principles

The overarching service principles are to:

- deliver public trust and confidence in the service
- help deliver appropriate care in the right setting by the right person at the right time
- improve the quality of the service and user experience
- Provide increased use of self-care or care at home or in the community with the same or better outcomes
- have access to and use of a shared patient record for viewing and updating by those providing care or advice
- provide prompt assistance with public health issues and natural disasters.

Objectives

The service will:

- provide consistent triage regardless of the location of the caller
- be integrated with local and regional health and injury services
- encourage and promote care delivered closer to home including self management with family/carer support as appropriate
- be innovative and flexible, able to adapt to changes in technology and public need
- maintain patient privacy and confidentiality at all times
- deliver on the strategic aims of each service component.

Outputs

This service will deliver:

- increased use of the national telehealth service over time
- call answering, triage and referral, signposting to definitive care
- links with clinical records
- compliance with service specifications
- service data/ information
  - client information (number enrolled, awaiting follow-up, completing programme
  - call summary information
  - call type breakdown
  - disposition breakdown
  - web use.
- Performance reporting:
  - satisfaction surveys
  - response rates, calls dropped.

Outcomes

The service will:

- contribute to meeting Government priorities incuding reduced ED attendances measured by comparison against baseline data and overall system impact
- work with health partners to develop and improve local/ regional patient care pathways and service delivery with monitoring plans in place to measure impact
- contribute to the ongoing development of an integrated health system
- further outcomes will be jointly developed as the service develops and matures.

The service brings together a number of health advice phone lines and other communication channels that the Ministry of Health funds. The Ministry of Health now co-funds the service along with the Accident Compensation Corporation and the Health Promotion Agency and has contracted Homecare Medical Partnership Limited to deliver the service. The Ministry of Health is the contract holder, supported by the funding partners, which work closely with Homecare Medical to deliver the outcomes expected of the service. Homecare Medical is a partnership between two of New Zealand's largest primary health organisations, Pegasus Health and ProCare.

The services are free of charge to users and available 24 hours a day, 7 days a week, 365 days a year. They are:

- Healthline
- Quitline
- Alcohol Drug Helpline
- Depression Helpline (including Depression.org.nz, The Lowdown, The Journal, and 1737 – need to talk?)
- Gambling Helpline
- poisons advice
- immunisation advice
- ambulance secondary triage.

For more information, see:
www.health.govt.nz/our-work/national-telehealth-service/aims-national-telehealth-service

Primary options for acute care

This section outlines how an alliance structure can support services responding to acute demand in general practice by implementing a set of primary options for acute care (the service) that can potentially have an immediate and significant impact on health outcomes for patients and curb the growth in acute admissions by empowering primary care providers to provide more flexible and responsive services. This section has been drafted by a team of DHB chief executive officers, general managers and primary health organisation (PHO) leads who are working together to further guide primary care services on the potential benefits in the role of providing primary options for acute care. For this reason, this section is deliberately aimed at PHOs and primary care services.

A primary options for acute care service should:

- provide the infrastructure and processes to support the multidisciplinary team and patient with a range of alternatives to an acute admission. To do so, the service may have to reconfigure a variety of existing community-based services and to identify some new services
- provide timely and responsive community-based services. To do so, it may have to define service requirements and negotiate with community-based service providers to reconfigure the services that they provide
- focus on managing acute situations. To do so, the service may limit the duration of the range of alternative services available to a patient (for example, a three- to five-day package of care could be initiated through the general practice team) through a model of care based on acute demand or primary options for acute care.

Although the service can have an immediate impact, it is anticipated that the behavioural and service changes it introduces will deliver a long-term, sustainable impact on the health status of people in the district.

Objectives

The alliance should work to:

- help people access new and existing community-based alternatives to ED presentations and acute admissions, outpatient appointments and other services delivered within hospital settings
- identify and address service gaps that contribute to admissions
- encourage insight into the issues and general practice support for reducing acute admissions
- initiate the culture change required to support the goal of reducing the level of acute admissions.

Principles

The PHO should work to:

- provide person-centred services that take account of, and are responsive to, the person's needs and that value the person's time within the health system
- provide services that support people to live well in the community and that are delivered as close to their home as possible
- give people access to the same range of services regardless of whether they are accessing those services from primary care or hospital settings
- support clinicians to make informed decisions on what is best for their patient at the time
- deliver services through a devolved decision-making process that clinicians develop and govern
- offer a flexible range of services that can meet the needs of the individuals who use them
- be accountable, along with contracted providers and other providers who deliver services, for delivering high-quality services that reduce the use of hospital services
- coordinate services at a district or regional level
- base the choice of the range of service providers on the best use of the available workforce and other resources within the district.

Service components

The PHO could work with other providers as appropriate to meet the above objectives and principles by delivering the following components, which potentially could be part of the service.

- **Acute demand service coordination**: A nurse-based team located at a district or regional level provides referral management services. The team should have extensive experience in practice, emergency and district nursing. Maximum benefit would be achieved by making the service available seven days a week between 7.30 am and 11 pm; however, its availability depends entirely on resourcing and an understanding of current facilities and local population need. The coordination team:
  - works closely with referrers to ensure the right service is provided in a timely manner. This includes helping referrers to ensure patients access the right service in a timely manner, collating and reporting all data; and matching referrals to claims and ensuring they are processed for payment
  - has troubleshooting as a large part of its work. For this reason, it has robust relationships with health professionals and providers across the sector.
- **Clinical director**: The clinical director undertakes retrospective clinical governance of referrals for the service. They liaise with, and provide clinical advice to, general practice teams, after-hours providers and paramedics on the use of the service. This role could

be shared across a number of clinicians who agree to meet on a regular basis and share clinical accountability for the use of the service.

- **Flexible packages of care**: A flexible range of general practice and community services helps to manage a patient's care in the community during an acute episode. A package of care may include (but is not limited to) extended general practice consultations, home visits, extended general practice services (eg, intravenous therapy, and observation), urgent home supports (eg, equipment hire, personal care, meals, home help) or social support (eg, transport, child care). Packages of care should be used alongside other acute demand services for an agreed period of time and may be appropriate for up to five days during the patient's acute episode. The service should agree on pre-approved values of packages of care, which may provide services to the value of about $500 per acute episode, before seeking prior authorisation from the acute demand service coordination team.
- **Access to rapid diagnostics**: The service offers selected laboratory and imaging (plain film X-rays, ultra sound and CT scan where available) diagnostics. It should report the results within four hours of referral from a general practitioner to enable quick decision-making and help avoid admission where possible.

The following are examples of other services that may be included depending on the nature of the population (eg, age, ethnicity) and its needs.

- **Acute community team**: An acute nursing role in the community provides a range of responsive, flexible and skilled nursing interventions in a patient's own home or another community setting. A local after-hours provider, general practice, PHO or district nursing service may provide these services.
- **Acute demand liaison nursing**: Nurses who work as part of the district nursing service liaise with the local emergency department and wards to identify people whose care can be safely transitioned back into the community. They liaise with the relevant general practice team, PHO and other providers as appropriate to arrange for the necessary care in the community.
- **Consumables**: This service is concerned with the medications and medical equipment required to care for acute demand patients. For patients managed by a general practice (eg, for intravenous therapy), consumables are part of the flexible package of care claim for each patient.
- **Clinical pathway tool**: A web-based information portal supports general practice teams in planning patient care through primary, community and secondary care systems.
- **Direct access to consultant advice**: A GP can immediately receive expert advice from a dedicated on-call specialist. Usually the specialist provides this advice by telephone, but may supplement it with email advice.

Referrals

General practice teams, after-hours providers, pharmacists and paramedics can refer into the service. Paramedics are encouraged to refer people to general practice when clinically appropriate, rather than transfer them to hospital. In this circumstance, the service covers the patient co-payment fee for the general practice consultation as part of the flexible package of care.

Patient eligibility

Any patient is eligible for the service where the referrer would otherwise refer them to the emergency department seeking their admission as an inpatient.

Hours of operation

The service's hours of operation are agreed locally, taking account of population requirements, and the local services and resources that are currently available. Ideally referrers are able to access the service between 7.30 am and 11 pm, seven days per week, although it is accepted that not all types of service will be accessible at all times.

Response time

The service is expected to be responsive to referrer requirements. So it should be able to organise the required services and report back to the referrer within 90 minutes of receiving their call.

Safety

All service providers and referrers providing the service are expected to take all appropriate measures to maintain the safety of both staff and patients.

Clinical responsibility

Patients need to remain at the heart of this service. They should be kept safe and well supported within their own homes wherever possible. Services to support this should be based in primary care and the primary care provider that the patient seeks services from remains accountable for their care and treatment.

Another service provider, after the patient's own general practice team involves it, may complete an acute management plan if the providers agree to it. Any changes to the plan would need the agreement of the patient's own general practice team, as discussed either directly with the team or with another primary care provider if the team chooses to delegate this responsibility after hours.

The patient's primary care provider, or another delegated medical practitioner after hours, documents and authorises all treatment orders.

For clinical and staff safety, it is not expected that a primary acute care service provider would visit new patients who have not been pre-assessed by their primary care provider, except within the context of existing after-hours medical care arrangements.

Warm hand-over

A formal warm hand-over process is required so that patients receive the planned level of support during an episode of care. The primary acute care service provider is expected to communicate directly with the referrer to ensure results of the assessments or changes in the patient's condition are received and acted on.

Clinical information

For some patients receiving the service, a detailed management plan may be made in discussion with the primary care provider. A copy of this plan is sent to the primary care provider to sign. This plan then stays with the patient and is copied to the support coordinator so that it is available if the patient must make further visits after usual hours of operation. The service providers are expected to keep clinical records to a good standard and at all times to keep the primary care provider and other support services informed of any relevant changes.

Support and coordination

The PHO ensures robust service development and clinical quality. It also implements information technology and administration functions to support the service.

Key performance indicators

The alliance develops and agrees on local key performance indicators for the service that the PHO will report to the DHB. These performance measures are likely to form part of the acute bed days system-level measure.

Measures of success and balancing metrics

The system-level measure for acute bed days encourages the health system to work together to help keep people well and at home and to reduce ED attendances and acute admissions.

For more information on the system-level measure, see the Ministry of Health's System Level Measure Framework (http://nsfl.health.govt.nz/dhb-planning-package/system-level-measures-framework). Here you will find:

- annual planning guidance on the system-level measure
- an example of an approach to developing improvement plans
- some improvement plans and alliance stories on their approach to developing their plans
- a guide to using the system-level measure framework
- a link to a measures library.

This document highlights how the whole system needs to work together to achieve this goal.

In essence, most organisations use acute medical bed days, ED attendances and occupied bed days as outcome measures for their acute demand programmes.

Also consider including balancing measures such as onward transport if your programmes include alternative pathways. Generally an accepted level of onward transport is around 10-15%. A higher percentage may increase spend without benefit and may delay patient care, possibly adding to the clinical risk.

One further option to consider is setting up a clinical governance group. This group would meet once every three to four months with the specific aim of reviewing pathways for conditions such as community acquired pneumonia, deep vein thrombosis, cellulitis, chronic obstructive pulmonary disease, heart failure, renal colic and other common acute presentations. The group should review case notes and revise the pathways as appropriate.

Chapter 3: Acute demand in ambulance services

Introduction

The ambulance services play a huge role in the management of and decision-making about acute demand, although their input can often be overlooked when organisations are redesigning their pathways of care. As a result of ambulance services' decision-making, patients may be managed at home; taken to their general practice; taken to a local urgent care clinic or ED; or referred into a single point of entry for falls management, smoking cessation or other care. Because a proportion of ambulance callouts are medication related, some health systems are now opening up their community hubs to allow referrals from ambulance professionals into an adherence support service based at a community pharmacy, which can reassess a patient's medications in a timely manner within a community setting.

St John and Wellington Free Ambulance offer a number of models of care including home-based treatment pathways; the clinical hub (for secondary triage); and agreed primary and secondary care pathways. Several organisations have now been meeting with their local ambulance teams, together with primary- and secondary-based services, to discuss and review ways in which they could contribute to the management of low-acuity patients in the community.

If your organisation has an acute demand network or alliance, it would be sensible to include a representative from the ambulance service in that group. To find out who your local ambulance service lead is, email kris.gagliardi@stjohn.org.nz (St John) or glen.mitchell@wfa.org.nz (Wellington Free Ambulance).

Top tip

Link up with your local ambulance lead from St John or Wellington Free Ambulance to involve them in early planning stages. Look at callout data to discuss pathways that could suit your locality.

Home-based treatments

Agreed care pathways are important to help us deliver the right care at the right time to low-acuity patients. Because the population is ageing and growing and chronic illness is increasing, the vast majority (81%) of ambulance patients are classified as minor or moderate (status 3 and 4). For this reason, it is crucial to develop efficient and effective ways of managing patients in the community (where appropriate). Some organisations such as Nelson Marlborough DHB have developed a Safe and Well Programme with St John to agree on pathways of care and referral pathways that have a single point of entry.

Safe and Well Programme

Essential features of the Safe and Well Programme are to:

- provide low-acuity pathways for patients who can safely stay at home but who have unmet health needs or require follow-up care
- connect patients with appropriate health services early and help patients to navigate the health system
- be preventive as an 'ambulance at the top of the cliff', not the bottom
- tailor services to meet the community need – rather than taking a 'one size fits all' approach
- develop, on an ongoing basis, the ambulance sector's electronic patient report form (ePRF), which provides electronic referral opportunities to DHB and PHO services
- put pathways in place, as has already happened in some DHB areas, that cover falls, vulnerable children, diabetes, smoking cessation, mental health, social support/review of home help and more.

Alternative transport options

Ambulance services are keen to work with organisations to identify options for transport other than to ED. Such alternatives will include accident and medical centres in some areas and general practice in others. For example, in Canterbury DHB's chronic obstructive pulmonary disease (COPD) programme, 35–40% of patients with COPD are now diverted back to general practice or the urgent care clinic. Chapter 7 provides a case study of this programme, demonstrating how it has reduced occupied bed days.

Condition-specific pathways

Clinical pathways are vital in ensuring appropriate care for high-acuity patients with ST-elevation myocardial infarction (STEMI), stroke, major trauma, spinal cord injury or other life-threatening conditions. Many organisations have also developed pathways for managing COPD or to ensure the ambulance service has direct referral pathways into falls programmes, mental health services, smoking cessation or vulnerable children services.

Other considerations

St John is developing books for all its districts with information on local pathways that DHBs and PHOs have agreed on. Over the next 12 months, all local pathways will become part of the Ambulance Sector Clinical Procedures app, where users can easily add and update pathways information.

The St John Clinical Procedures and Guidelines (www.rgpn.org.nz/Network/media/documents/St%20John%20CPGs%202016-18/St-John-CPGs,-comprehensive-edition,-2016-2018.pdf) offer a useful resource. They have an increased focus on low acuity, including falls risk assessment, management of asthma and chronic obstructive respiratory disease in the community, oral pain relief, urinary catheter and general troubleshooting.

In addition, regional new pathways are:

- Nelson Bays patient pathways www.health.govt.nz/acutedemandtips
- Canterbury clinical pathways. www.health.govt.nz/acutedemandtips

Measures of success and key balancing metrics

The ambulance services are able to supply data across a range of parameters to support organisations in identifying opportunities for alternative pathways and assessing the success of agreed pathways. Such assessment can include not just callout numbers, but also data by condition, locality, time of day and destination. Some districts are using this data to look at callouts from aged residential care for a range of common conditions, such as falls and blocked catheters, to develop understanding of these areas and to review opportunities for improvement.

By meeting with your local ambulance teams, you can learn about volumes and percentages of:

- patients who are seen and treated at the scene without being transported to a medical facility
- transports to non-ED facilities such as general practices and urgent care clinics
- those who fall into the 'Hear and Advise' category (those who undergo secondary triage by the clinical hub)
- transports to ED.

When looking at balancing metrics for specific conditions, aim to avoid an excessive number of onward transfers as this adds delay, as well as increasing workload and clinical risk. For example, in the early stages of the Canterbury COPD programme, it became apparent that around 30% of patients taken to accident and medical centres with COPD were requiring onward transfer to ED and were considered a clinical risk. Although views vary on what is acceptable, many consider that an onward transfer rate of about 10–15% is appropriate. Some patients will inevitably deteriorate and have to be admitted, but if the rate is below 10% then the threshold for transport may be too low. This should be a subject of discussion when establishing a new pathway of care so that you can plan to measure unintended consequences and discuss them in establishing the new pathway of care.

Chapter 4: Acute demand in emergency departments

Introduction

Emergency departments are inevitably a key player in the acute care system. They need to interact with most of the specialties within the hospital environment and many primary and community services. Over the past few years, as a result of a focus on flow within EDs, many organisations have implemented a range of initiatives to support and drive change. This section covers some of these initiatives and outlines potential measures for success.

In addition to providing strong, clear leadership on a daily basis, it is important to consider leadership in a broader sense. Through their links with other departments, senior medical officers (SMOs) can play a useful liaison role for EDs. Another consideration is having portfolios of work for SMOs' non-clinical time.

Meeting the health target of shorter stays in emergency departments

ED length of stay is an important measure of the quality of acute (emergency and urgent) care in our public hospitals, because:

- EDs are designed to provide urgent (acute) health care; having timely treatment (and spending a shorter time waiting) is by definition important for patients
- long stays in emergency departments are linked to overcrowding of the ED
- the medical and nursing literature has linked both long stays and overcrowding in EDs to negative clinical outcomes, such as increased mortality and longer inpatient stays
- overcrowding can lead to compromised standards of privacy and dignity for patients – for instance, through the use of corridor trolleys to house them.

For more information, see the Ministry of Health's discussion on this health target: www.health.govt.nz/new-zealand-health-system/health-targets/about-health-targets/health-targets-shorter-stays-emergency-departments

Streaming

Some models stream admitted and non-admitted patients. Larger EDs have adopted a streaming strategy that places patients in one of three areas:

- resus (resuscitation)
- ambulatory, which consists of single-system issues that should see the patient returning home
- work-up, which includes the undifferentiated patient.

The key elements to consider are that staffing in each area needs to match the workload, which may make flexibility necessary at different times in the shift. Larger departments tend to have a 'roaming senior doctor' to provide early decision-making and 'grunt at the front': decision-making as soon as possible after the patient has arrived at ED is thought be one of the key factors in managing acute flow. EDs should also offer nurse-initiated treatments and referral for appropriate cases.

Top tip

For each stream, provide clear oversight, identify ownership and roster staff geographically. Put nurses within each area in charge of flow.

All EDs should operate some form of streaming system so that patients are seen in the most appropriate setting with the right level of clinical support.

Top tips

- Give explicit responsibility for patient flow either to a dedicated ED flow nurse or as an explicit function of the senior nurse and doctor in charge of the shift. (Having a non-clinical person to help the flow is not the preferred model as it tends to move patients through ED based on time rather than on what is clinically useful.)
- Measure and display metrics about flow (eg, length of stay and occupancy) to help staff understand the clinical progress of patients.
- Consider how you know who to see next. How visible are the queues?
- Consider who is doing what. Could other staff carry out certain roles or functions effectively? Do you make the most of the role of health care assistants?
- Does the availability of equipment and consumables support or hinder flow? Is the right equipment in the right place when you need it?
- Do you make the most of the use of all other skill sets in the department, such as pharmacy support for medication review and reconciliation?
- 'Dressed is best': Wherever possible, practise ambulatory emergency care. Assume patients can walk and be discharged unless proven otherwise. (See Chapter 6 for more detail.)

Fast-track or ambulatory care zones

Many EDs run fast-track or ambulatory care zones, staffed by nurse practitioners, to improve the flow of the department. In this way they can see and treat lower-acuity patients more quickly and reduce congestion within their waiting areas and clinical areas.

Patient flow coordinators

Patient flow through ED is critical. An ED should have a dedicated resource with explicit responsibility for patient flow – either a dedicated ED flow nurse or as an explicit function of the senior nurse and doctor in charge of the shift. Note that having a non-clinical person to facilitate the flow is not usually the preferred model as it tends to move patients through the ED based on time rather than what is clinically useful.

To support this role, it is critical to measure and display metrics on flow (eg, length of stay and occupancy) in order to help staff understand the clinical progress of patients.

When looking at your ED, consider: How do you know who to see next? How visible are the queues? How are you currently managing flow?

In addition to the flow, consider who is doing what. Could other staff carry out certain roles or functions effectively? Do you make the most of the role of health care assistants in your department? What is the flow of information and data capture? Do your IT systems support your clinical and administration teams to make best use of their time?

Top tip

Give an SMO within the department a liaison role with another department such as general medicine or orthopaedics.

Hold staff meetings with specialties where you can develop internal standards and work through opportunities to review measures and improve process.

Internal professional standards

An ED cannot operate in a vacuum. It depends strongly on the hospital specialties to draw patients into their respective areas. Map out the process from the decision to admit to the actual admission across specialties – in particular, general medicine, general surgery and orthopaedics – to identify any ways of improving this flow of admitted patients.

Clinical agreements and pathways

Consider what pathways you have in place across the department and how they have been agreed. Are there different pathways for in hours and out of hours?

- Have agreed criteria for transfer to ward (like the fractured neck of femur pathways, but applicable to many other patient groups).
- Review by inpatient registrar in the ED only when required for patient benefit and not as a routine.
- Encourage wards to accept referrals from ED based on negotiation, no refusal, and on the concept of 'best fit' rather than definitive diagnosis.
- Decide what imaging to do and when. Consider the value of the imaging and its impact on your decision-making. The Choosing Wisely campaign (www.choosingwisely.org.nz) encourages clinicians to recognise that more care is not necessarily better and that, as well as failing to improve a patient's care, unnecessary interventions can actually cause harm.

For examples of a pathways approach, see Chapter 7.

Emergency department observation units

Have strict admission rules into your ED's observation unit. According to the Ministry of Health, the **key features** of an ED observation unit are generally that it:

- allows for a short period of observation, further treatment or further investigation by ED staff
- is for patients who are perceived to be safe for discharge at the end of that period
- usually has no need, or is unlikely to need, input from inpatient staff or teams
- has a usual duration of stay of six to eight hours, but can extend up to a maximum of 24 hours. Certain pre-defined patient groups may remain in the ED observation unit beyond this time if the patient is best served by continuing to be cared for by emergency medicine specialists.

For more information, see the updated ED observation and short stay guide.

Streaming and the use of Emergency Department Observation Units and Inpatient Assessment Unit www.health.govt.nz/acutedemandtips

In general, the following guidelines apply to an ED observation unit.

- Do not use it as a waiting room for admission.
- Have in place an agreed checklist of admission conditions. These are likely to include:
  - head injuries
  - renal colic
  - anaphylaxis
  - post seizure
  - pain relief.
- Have an agreed maximum stay period (generally up to 12 hours).
- Set an appropriate discharge rate at over 85%.
- Provide senior medical oversight with a senior doctor review every morning.

ED capacity and overload triggers

How do you know when your department is approaching overload? What are the triggers and do you have an early warning score?

See Chapter 7 for a worked example of an ED capacity plan designed at Canterbury and revised in March 2017. Clearly you would need to shape this plan to fit your local department and to look at it in tandem with the overall hospital flow.

Additional considerations

Other areas that you may find it worth exploring or considering further include availability of and access to pharmacy, radiology and laboratories; procedural sedation; and the system for handling GP calls.

Pharmacy within ED

- Do you have pharmacy input into your ED?
- Can pharmacists access prescriptions and clinical notes?
- Do patients have opportunities for a medication review?
- In general, does your organisation have any public campaigns to encourage patients to seek advice from pharmacy for minor ailments such as coughs and colds?

> **Top tip**
>
> Seek opportunities to agree on pathways with pharmacy and ambulance services for medication review before or while the patient spends time in ED.

Access to radiology and laboratories

Where access to radiology from primary care is reduced or not prompt enough, it is often a significant reason why patients arrive at ED.

Within your organisation, what is the level of access to radiology, in particular urgent CT scans?

- How long does it take to report results?
- What are your turnaround times? How do they vary between in-hours and out of hours and at weekends?

Having the above information is key to understanding flow across and out of the department.

Procedural sedation

Given procedural sedation involves extensive resources, it is wise to record and audit any changes in practice.

- Do you have flexible arrangements in place for managing procedural sedation when the department is approaching overload?
- How does the ED discuss and agree on such arrangements with the relevant departments?

Make these matters part of inter-departmental discussions where appropriate.

SMOs answering GP phone calls

- How does the ED handle calls from GPs?
- Do GPs have easy access to an SMO rather than a registrar?
- Can GPs admit straight to the assessment unit rather than having to transit through ED?
- What is the level of availability of acute slots in clinic?

Measures of success and balancing metrics

When assessing your ED, look at:

- presentations per 1,000 population
- volumes per month
- admission rate
- attendances from rest homes
- return rates – both scheduled and unscheduled. Where rates are:
  - scheduled, what conditions are you bringing back and why? (Patients should only come back to the ED if they require tertiary-level care from the ED team.)
  - unscheduled, they should be less than 3%
- how GP referrals come in and, if they come via ED, how they are counted
- whether you capture key decision points. Potential gold standard measures include:
  - nurse assessment within 15 minutes for 90% of patients
  - medical assessment within 60 minutes for 90% of patients
  - placement decision within 150 minutes for 90% of patients
  - patient departing ED within 210 minutes for 90% of patients
- attendance by triage category
- admission by triage category.

Recommendations from the Australasian College for Emergency Medicine

Table 1 sets out the measures that the Australasian College for Emergency Medicine (ACEM) recommends for target times and admission rates by triage category.

Table 1: Attendance times and admission rates by triage category

Category	Triage target times	Expected admission rate
Triage 1 (immediate)	100%	75%–90%
Triage 2 (10 minutes)	80%	60%–70%
Triage 3 (30 minutes)	75%	50%–60%
Triage 4 (60 minutes)	70%	20%–30%
Triage 5 (120 minutes)	70%	5%–10%

Note: See https://acem.org.au/getattachment/693998d7-94be-4ca7-a0e7-3d74cc9b733f/Policy-on-the-Australasian-Triage-Scale.aspx for more detail.

Top tip

If you are reporting an admission rate of 30% for triage 2 patients, then question whether over-triaging is taking place. Similarly, if the admission rate for triage 3 is 75%, consider whether you are under-triaging and whether some of these patients should be a triage 2.

Real-time performance measurement

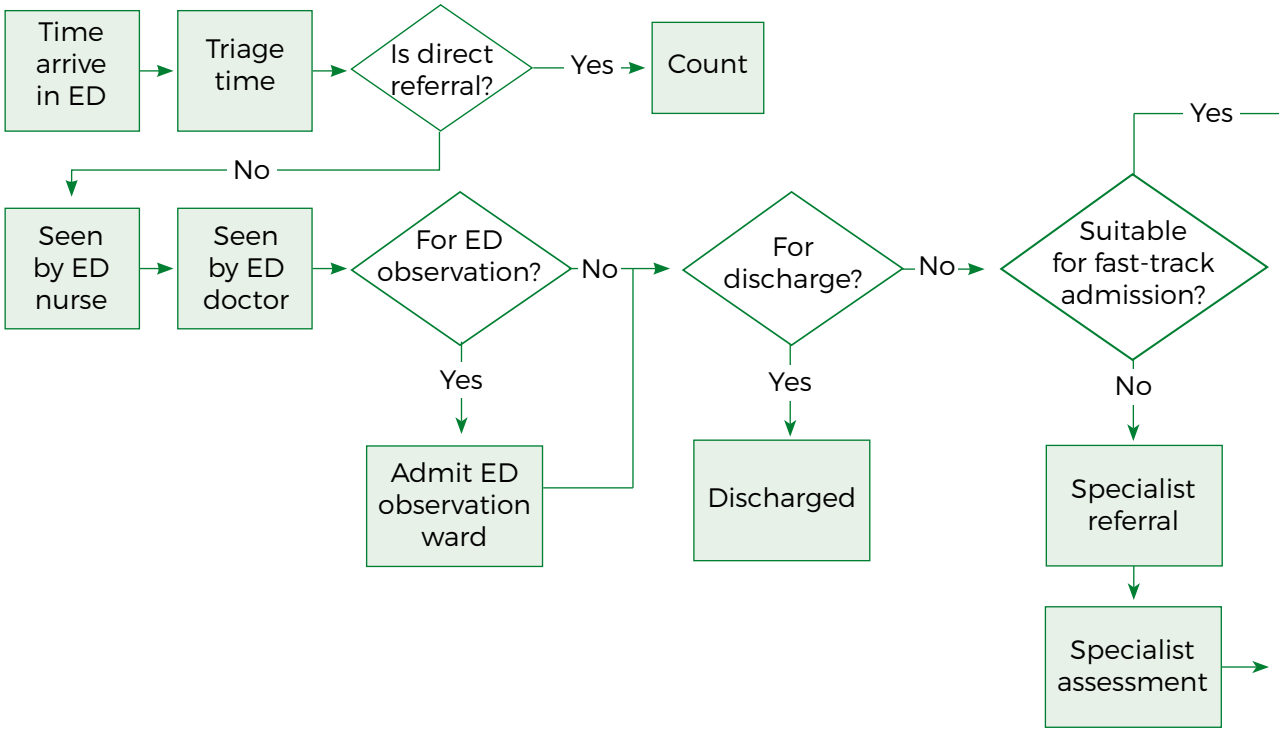
Through your ED screens, you should be able to monitor real-time performance such as:

- ED attendances
- admissions from ED
- triage categories:
  - waiting times by triage categories
  - admission rates by individual triage categories
- various data on length of stay from time to triage, time to being seen by a clinician, time of referral, time that the referring team sees the patient, length of stay after that, time when a bed is ordered, waiting time for a bed, waiting time for transfer to an inpatient unit, overall length of stay in ED from admission to discharge, transfer or admission
- number of patients admitted to an ED observation unit or short stay unit
  - number of these patients who go on to get admitted to hospital
  - ED discharge rate from observation unit
  - length of stay in ED observation unit or short stay unit
- ED return rate
  - unscheduled returns to ED
  - scheduled returns to ED.

In addition, all DHBs should be collecting data for the ED Quality Framework. This framework includes a list of measures that you should take continuously, regularly and occasionally. For further information, see the National Emergency Departments Advisory Group (2014) (www.health.govt.nz/publication/quality-framework-and-suite-quality-measures-emergency-department-phase-acute-patient-care-new).

Figure 5 presents an example of process mapping with key data points, which is helpful to understand the areas for improvement and potential delays.

Figure 5: Example of process mapping



Source: Lightfoot Solutions Group Ltd

For additional resources, see Chapter 7.

Chapter 5: Acute demand in hospital operations centres

Introduction

The operations centre should function as the nerve centre of the organisation. To fulfil this role, it requires clear governance and control.

Choices may be limited around where the operations centre is located and which other functions share that location. However, in some DHBs the operations centre is co-located with a number of other facilities and services to aid communication.

Examples of other facilities and services that may be co-located with the operations centre include:

- duty manager's office
- resident medical officer's office
- hotel services (including security, orderlies, catering and cleaning)
- emergency management response
- nursing bureau and casual nursing pool
- clerical and administration pool
- allied health
- GP liaison and primary care liaison
- community and district nursing
- transport.

Operations centre governance

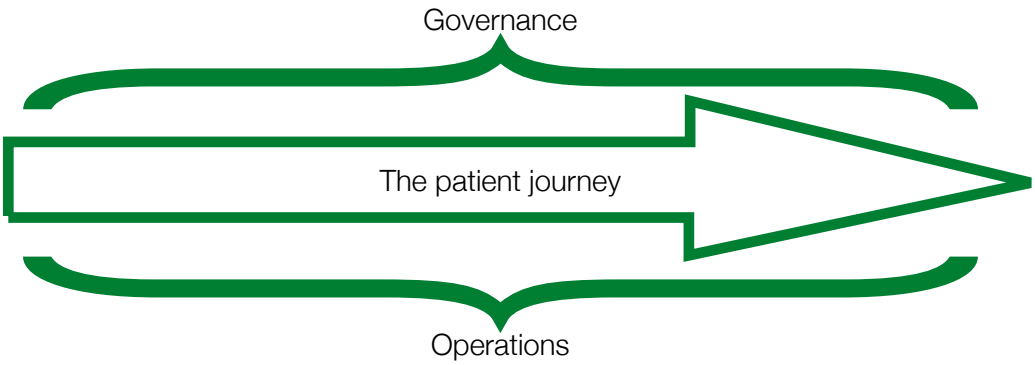
Ardagh (2015) describes a comprehensive approach to improving patient flow in hospitals. This model has three foundation principles.

1. The patient journey, as experienced by the patient, is the vantage point from which everyone looks at patient flow.
2. All staff in the system are citizens of the system and are working together to maximise the utility of the whole system, rather than just parts of it.
3. Avoiding queues, or at least limiting their length, is a priority.

Its three conceptual components (Figure 6) are:

1. governance
2. the patient journey
3. operations.

Figure 6: The 'left to right, over and under' model for improving patient flow



Source: Ardagh 2015

To read the full paper, see: www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2015/vol-128-no-1420-21-august-2015/6625

The Institute for Healthcare Improvement's Optimizing Patient Flow programme

Because waits, delays and cancellations are so common in health care, patients and providers assume that waiting is part of the care process. But recent work on assessing the reasons for delays suggests otherwise.

Optimizing Patient Flow is part of a series of innovative programmes the Institute for Healthcare Improvement (IHI) in Boston has developed to help hospitals improve the care they provide patients. With the Optimizing Patient Flow programme, IHI focuses on the barriers to timely and efficient flow of patients through acute care settings. Its programme offers a model for evaluating patient flow, testing changes for improvement and measuring results.

IHI and approximately 50 hospitals have been working together to evaluate what influences the smooth and timely flow of patients through hospital departments, and to develop and implement methods for improving flow. Specific areas of focus include: reducing waits for inpatient admission through emergency departments; achieving timely and efficient transfer of patients from the intensive care unit and the post-anaesthesia care unit to medical and surgical units; and improving flow from the inpatient setting to long-term care facilities.

While few hospital areas are designed to achieve optimal flow of patients, the emergency department, intensive care unit and operating rooms and their related pre- and post-care areas tend to be major bottlenecks because no other resources can be substituted for them. To reduce delays and unclog bottlenecks, it is necessary to assess and improve the flow among these departments, and throughout the entire system, rather than concentrating only on isolated departments.

IHI believes that the key to improving flow lies in reducing process variation that impacts flow. While some variability is normal, other variation is not and should be eliminated. Hospitals working with IHI have tested a range of changes to reduce process variation and improve flow. IHI (2003) describes these changes – see www.ihi.org/resources/Pages/IHIWhitePapers/OptimizingPatientFlowMovingPatientsSmoothlyThroughAcuteCareSettings.aspx

Forecasting and production planning

In addition to daily bed meetings (see Chapter 5), it is good practice to undertake effective production planning and rostering every four weeks. This planning often includes the chiefs of service and senior nursing. Those involved need to understand the organisation's productive maximum capacity and be able to flex demand such as short-notice pre-ops to fill last-minute slots.

Some organisations, such as Canterbury DHB, manage their nursing roster to 97% and use casuals to cover unplanned leave and sickness. However, many organisations roster to about 85%–90%, which increases difficulties when trying to manage acute demand during winter months.

While many focus on the potential to cancel electives, some organisations apply a 'no cancellation rule'. It is important to remember that electives account for only around 20% of the overall demand on the hospital's resources and therefore most effort should concentrate on managing acute demand and/or increasing supply of resources (such as nursing and beds).

At the same time, it is worth considering the overall impact of electives, particularly in terms of the day of the week and the time of year. Do you have opportunities to smooth demand? For example, is it helpful to have a large surgical or orthopaedic list all day on Monday when acute cases are at a peak, or could you smooth demand over the winter months by changing the operating day?

Daily bed meetings

For most organisations, the operations centre, including the daily bed meetings that it holds, functions from Monday to Friday with a different process at weekends. Some organisations have discussed the need for meetings to run throughout the weekends as well. However, this is impractical for many organisations and some consider that good planning, particularly on Thursday and Friday, should prevent the need for establishing a seven-day-a-week operations centre.

Many of the established operations centres have the following members:

- general manager
- nursing directors
- SMOs – mainly from ED and general medicine (but often including orthopaedics and surgery as required)
- facilities
- orderlies

- security
- allied health
- pharmacy.

Additional members may include:

- acute demand or primary options for acute care coordinators
- trauma coordinator (as required).

The operations centre needs to clearly identify who is in charge of flow. Including an executive as a member and/or having a clear line of sight to the chief medical officer or chief of department is important, particularly when actions are required.

Generally bed meetings are held once a day during weekdays around 11–11.30 am. Some organisations hold additional meetings at 8.30 am and 5 pm.

The Thursday meeting is often the crucial meeting to put plans in place for Friday and the weekend.

During on-call it is helpful for the on-call manager to regularly call in and check the status of a department rather than waiting for the duty manager to call with an issue.

Roles

Some organisations, such as the Bay of Plenty DHB and Canterbury DHB, have a patient flow coordinator or manager who has delegated authority to enable decisions to be made on behalf of the system quickly and effectively.

In practice, most of the patient flow roles and duty manager positions sit within the nursing hierarchy. While clearly these roles should be clinically driven and usually led by nursing, this structure does not always encourage the inclusion of doctors within the operations centre. It may therefore be appropriate to consider an arrangement where patient flow leads report to and have delegated responsibility from the chief operating officer.

Top tip

Rotate new SMO and senior nursing or allied health staff through the operations centre as part of their induction and orientation.

Visibility and data accuracy

One of the key issues for managing patient flow is to make visible the state of the hospital sites across the system. This may include being able to see their state at a glance on ward home screens and as a home page on many other screens across the hospital.

During a workshop on running effective operations centres, one of the key messages to emerge was the need to make data visible across the hospital to multiple disciplines. Such visibility prompts a change in culture across the organisation as everyone realises that flow is their business and takes ownership of it. Canterbury DHB aims to develop this culture by creating dashboards called 'Seeing Our System'.

Another suggestion is to include key banners or snippets of news on the Hospital at a Glance screen for quick updates on hospital status.

Some see both CapPlan and TrendCare as useful tools when used in tandem: CapPlan for planning and forecasting; and TrendCare for the immediate situation. In addition, if you have an ED overload tool it is sensible to include this in the operations centre view.

When making data visible, the general message is to avoid cluttering screens with dashboards. While having many dashboards may be useful in the duty manager's office, for many users the screens begin to look busy and can be off-putting when trying to socialise patient flow across the organisation.

To manage the hospital effectively, you need to input data on admissions and discharges in real time. Many areas have found batching of discharges by ward teams, particularly at busy periods, can be useful but it frequently compounds the issue, leading to unnecessary waits, delays and outlying of patients. Batching frequently also occurs overnight; however, this may be a less significant issue with fewer discharges involved. It is also important to enter all additional nursing time, overtime and care rationing into systems so that production planning and future management of nursing rosters are accurate.

Although some organisations still have duty managers rounding on the wards, many sense the need to build a culture of trust. This includes both trusting the data and trusting colleagues on the ward to manage flow; enter discharges in a timely manner and 'pull' from admission units and ED.

Escalation protocols

Most organisations have some degree of winter planning. This will usually involve:

- ED
- surgery and orthopaedics
- general medicine
- older people's health
- radiology
- theatre
- allied health.

In addition, to take a whole-system approach, planning should include primary options for acute care or acute demand services, large accident and medical centres and ambulance services.

Some common themes and outcomes from these plans include additional allied health between certain forecasted dates; third medical teams working on Sundays to help with discharges and prevent queue-building on Monday; and directing GP calls to general medicine SMOs rather than registrars. Anecdotally, directing calls to SMOs can save between three and seven admissions per day on average over winter.

Many organisations also have formal escalation plans and trigger points. These plans, which you should agree on locally, are likely to include the number of:

- patients waiting over 30 minutes for a bed
- general medicine beds available
- general surgery beds available.

The number varies but generally is around 1% of the total bed number. (For example, Canterbury DHB, with 536 beds, considers having fewer than five general medicine beds is a trigger point.)

Escalation plans are often triggered too late when the queue has already built and options to manage the problems are limited. They should include early warning triggers and clear action plans. Using colour coding is often helpful.

For an example, see the Counties Manukau Escalation Plan
www.health.govt.nz/acutedemandtips

Safe staffing and healthy workplaces

The Safe Staffing Healthy Workplaces Unit sits within Technical Advisory Services. It was formed through a collaborative agreement between the New Zealand Nurses' Organisation and the DHBs.

The Unit has developed the Care Capacity Demand Management (CCDM) programme to address key elements of the safe staffing and healthy workplaces agenda. In particular, it aims to meet the requirement to deliver high-quality patient outcomes in high-quality work environments in ways that use health resources efficiently.

Fundamental to the success of the CCDM programme is that each DHB has access to a validated patient-acuity tool. Based on the validated acuity data from this tool, DHBs can calculate the number of nursing full-time equivalent positions they need and identify the recommended skill mix. They can also use the data in forecasting, planning and funding.

The three main elements of the CCDM programme are:

1. providing an evidence-based method for setting the base staffing model in wards (numbers, skill mix and schedule), which uses validated patient acuity data
2. developing and supporting a system of multiple response strategies (variance response management) for DHBs to manage short- and mid-term variance in demand and capacity so that they can meet demand while maintaining safety and quality
3. developing technical and social processes around a core set of data that is meaningful to everyone, from staff working in the wards to the board members, to gain real-time feedback and monitor the demand–capacity match over time.

The Safe Staffing Healthy Workplaces Unit has skills and resources available to all DHBs to support them with understanding variance and addressing patient flow. For example, it offers a 'Churchill exercise', which simulates a war room scenario. Participants examine data from a day in their organisation, together with the lead-up events and the actions taken on the day. From this exercise they can gain useful insights into the effectiveness of the plan and opportunities missed.

For more details on the Unit's work and its CCDM programme, see:
https://tas.health.nz/strategic-workforce-services/safe-staffing-health-workplace

Practical advice for moving staffing

Frequently organisations move staff across wards to help during busy times. However, many of these staff are unfamiliar with the layout of the area and the key tasks that it would be helpful for them to do. To address this issue, some organisations have developed useful tips or lists to support incoming staff, as well as providing ward layout plans to help with orientation.

These arrangements can also help when staff move for short periods (around an hour) to help with meal breaks and similar circumstances.

Top tip for moving staff

To get the best performance from incoming support staff at busy periods, provide:

- a ward map showing key locations
- a list of tasks – for example, observations, bins and restocking – for incoming health care assistants or nurses.

Top tip for improving patient flow

- Make patient flow 'everyone's business'. To manage it effectively, it needs to be part of your organisation's culture.
- Do not let the queue build – have an early warning system in place and act on it.
- Make data visible across the organisation. Trust the data (use it to improve flow).
- Develop a culture of flow – socialise, visualise and communicate it.
- Involve senior medical staff in driving flow.

Measures of success

Successful operations centres are key to managing patient flow. Markers of their overall success should include:

- having no patients waiting in ED on a Monday morning for admission
- having one or two empty medical beds on a Monday morning to help ease patient flow
- meeting national targets for ED waiting times and agreed local professional standards
- having in place a clear operational governance structure
- following a good forecasting process and action plans (particularly for escalation and winter planning)
- having a method for reviewing key events and analysing the data to understand overall demand and capacity.

Chapter 6: Acute demand in inpatient services

Introduction

Inpatient services are an important part of the acute care system: in many hospitals, they take up to 80% of overall workload. This section focus on three key issues:

- discharge planning
- management of frailty and frailty pathways
- palliative care.

Discharge planning and expected dates of discharge

Elements of effective discharge planning

Discharge planning needs to start almost from the moment the patient is admitted. A good measure of success is for 90% of patients to have an expected date of discharge set within the first 24 hours. Shared planning, information sharing and care planning with the patient are often important elements in supporting a safe, successful discharge.

One of the common reasons for delayed discharge is a lack of communication with patients and their families around planned discharge dates. As a result, family members receive short notice of an upcoming discharge and cannot coordinate their plans to pick up their relative promptly.

Another important measure to support a timely discharge is making available complete and accurate patient medications in a timely way. Wherever possible, encourage staff to proactively share this information and discharge summaries with pharmacists. It is possible to refer patients to the medications adherence service and medications reconciliation through a number of pharmacies nationally. Consider this option, particularly for patients over 65 years of age who are receiving five or more discharge medications.

Figure 7 gives an example of a 'ticket home' that Capital & Coast DHB gives to patients and their families to make sure they understand the plan for discharge.

Figure 7: Example of a 'ticket home' for patients and their families

Do you know the answers to these questions?

- Why did I come to Hospital?
- What do I need to do to get better?
- What can my family or friends do to help? Do they need anything from our staff?

It's important you know what's happening while you are here.

We try to keep you updated, but if you don't know the answers to any of these questions or others, please ask!

Capital & Coast
District Health Board

Planned ticket home
FROM INTERNAL MEDICINE SERVICE

Initial Information for patients and their families

INFORMATION FOR:

Patient name _____

Your consultant (or specialist) is:

Your Registrar is:

(Other doctors and nurses may look after you on a daily basis)

Allied Health Team:

If you want to talk to a doctor, please ask the nurse in charge.
Ask any staff member if you want an update on your progress.

You have been admitted to hospital because:

For you to be discharged from hospital, these things are necessary:

Your expected date of discharge is:

(this may change)

Welcome to the Internal Medicine Service at Wellington Hospital. We will work with you and the people important to you to deal with the reasons you came to hospital.

Over the next few days, you'll talk to lots of people. We want to hear about:

- how you were feeling before you came to hospital
- how you feel now
- what you, family or friends believe you need so you can leave hospital

Your stay will involve:

- doctors figuring out what is wrong
- treating what is wrong
- teaching you about how to stay healthy
- helping you to look after yourself

We'll make sure you have a plan in place to help you look after yourself when you go home. This might mean making sure you have the right equipment or home support.

Source: Capital & Coast DHB

Daily board and ward rounds

Many wards now have a daily or twice-daily board round (the first around 8.30 am and the second around 4 pm). The following is a typical script for these board rounds:

- patient details (eg, Mrs Jones, age 89, from home, currently day 4 of her admission)
- diagnosis and brief summary of clinical issues
- care plan status (the criteria for discharge)
- discharge requirements and potential Issues (eg, allied health, transport, home situation, equipment)
- allocation of tasks and responsibilities (including timing)
- update on expected date of discharge.

A key consideration in managing patient flow is the order in which decisions are made on the wards and its impact on the rest of the hospital. For this reason, many hospitals, particularly in general medicine, try to review patients in the following order:

1. patients to be discharged today
2. patients to be discharged tomorrow
3. deteriorating patients (with high early warning scores)
4. new patients – their expected date of discharge and needs for allied health
5. clinical incidents
6. allocation of juniors.

For additional information, see:

Ward Rounds in Medicine: Principles for best practice
https://www.rcplondon.ac.uk/projects/outputs/ward-rounds-medicine-principles-best-practice

Clinical Medicine 2011, Vol 11, No 6: 524–8. The impact of twice-daily consultant ward rounds on the length of stay in two general medical wards
http://www.clinmed.rcpjournal.org/content/11/6/524.full?sid=692555ba-1121-4f14-9bf0-75f3bde9b239

Clinical criteria for discharge

Clinical criteria for discharge can be particularly useful to promote weekend discharges when the patient may be fit for discharge over the weekend if they meet the criteria. Staff can document these criteria on the Friday and file them in the patient's notes so that the patient can potentially be discharged over the weekend without the need for another medical review.

For examples of discharge criteria for different hospital departments, see Chapter 7.

Frailty pathways

Hospital presents a number of increased risks for the frail elderly, including:

- risk of falls, disorientation or delirium in an unfamiliar environment
- dependency or institutionalisation
- loss of familiarity with own home environment
- hospital acquired infection
- iatrogenic harm such as oversedation or another medical mishap.

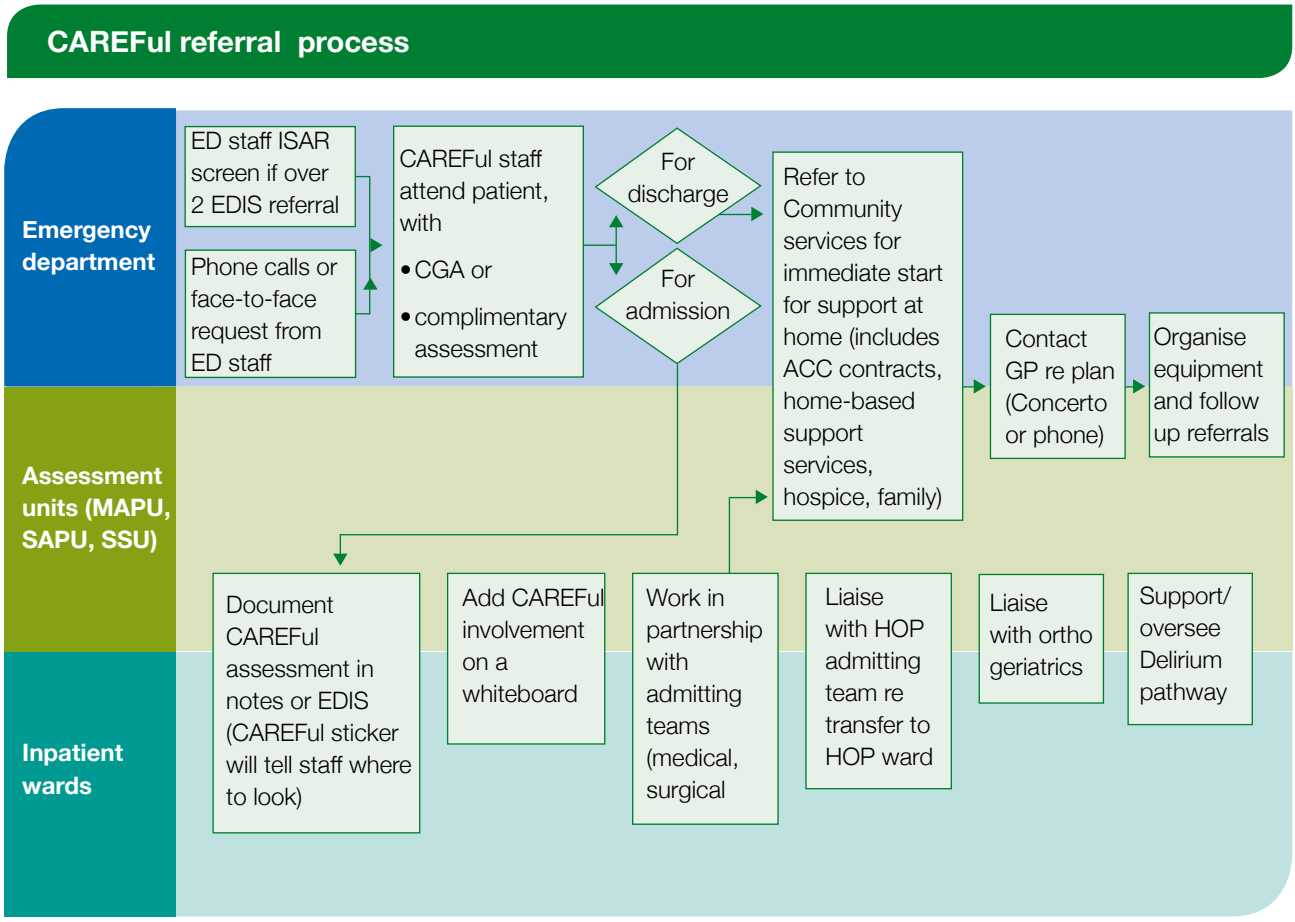
For this reason, some DHBs are starting to take an interdisciplinary team approach to assessing and managing frailty in ED. Many of these teams include social workers, physiotherapists, geriatricians, pharmacists, nurses and occupational therapists.

For example, under the model in Hawke's Bay DHB the social worker carries out basic mobility assessments and cognitive assessments and is accredited to issue walking aids and other equipment. This move from a multidisciplinary to an interprofessional model has many benefits.

- It removes the need for multiple assessments by multiple professionals.
- The patient needs to tell their story only once.
- Less duplication increases efficiency.
- The patient and their family and whānau experience better continuity of service.
- Continuity improves for the medical and nursing teams waiting for ORBIT feedback that they can use for discharge planning.
- Clinicians gain opportunities to broaden their scope by learning skills from each other.

Another example is the CAREFul Team at Capital & Coast DHB, which has input from an SMO and registrar geriatrician, senior nurse, senior physiotherapist, pharmacy, occupational therapist and social worker. Figure 8 shows their referral process.

Figure 8: Example of a frailty pathway – the CAREFul referral process



Source: Capital & Coast DHB

As a result of using this model, the DHB has reduced the length of stay for patients aged over 75 years and reduced readmissions.

Frailty assessments

A number of frailty assessment tools are available. Figures 9 and 10 present two examples.

Whatever tool you use, the key is how to use the information once a patient has been assessed as frail so that you understand and agree on an appropriate pathway. How will the patient be managed? Who drives the process and what will you do differently?

Figure 9: The Edmonton Frail Scale

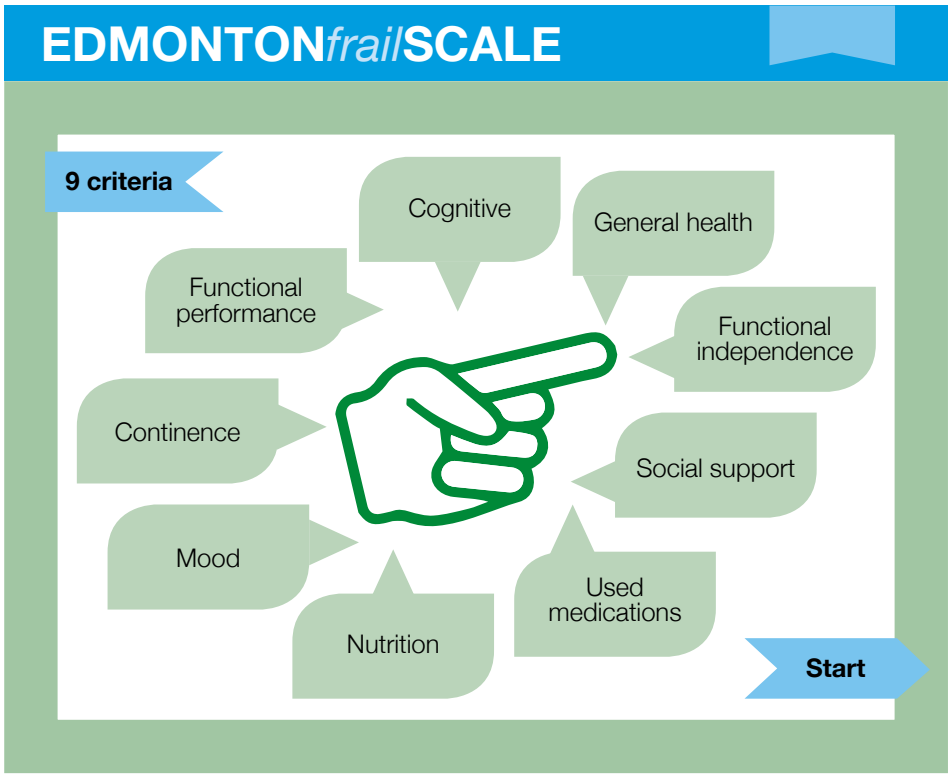


Figure 10: The Canterbury Frailty Screening Tool

Canterbury
District Health Board
Te Poari Hauora o Waitaha

Christchurch Hospital
Department
General Surgery

(Attach Label here or Complete Details)
NAME _____ NHI _____
GENDER: ___ DOB _____ AGE ___ WARD _____

Frailty Screening Tool
Initial Screening Questionnaire

Criteria = > 65yrs / Admitted
Positive Result = **2 and**

	To be completed by staff with the patient or carer in SARA	Please Circle	Score
1.	Before your illness or injury that brought you to Christchurch Hospital, did you need someone to help you on a regular basis? (all patients in residential care/ rest home = Yes)	Yes	1
		No	0
2.	Since the illness or injury that brought you to Christchurch Hospital, Have you needed more help than usual to take care of yourself?	Yes	1
		No	0
3.	During the past 6 months have you been hospitalised for 1 or more nights (this does not include staying in the Emergency Department)	Yes	1
		No	0
4.	In general do you see well? (with adjusted vision – glasses)	Yes	0
		No	1
5.	In general do you have serious problems with your memory? (If unable to answer question = Yes)	Yes	1
		No	0
6.	Do you take more than 3 different medications every day?	Yes	1
		No	0

PROCESS if Positive Score ≥ 2 Score

- Indicate on the Communication board
- Refer to Allied Health Team at board meeting
- Place form in the Clinical Record / track patients in ledger
- To be seen within **24 hours of admission** for assessment by **Geriatrician**
- Date ..... Time.....
- Signature/designation: .....
- Delay to assessment – (please indicate) Weekend / other ----------
- Comments.....

FRAILTY TOOL

Source: Canterbury DHB

Comprehensive geriatric assessment

The comprehensive geriatric assessment is a process to assess and manage illness in older people. It aims to:

- identify what the problems are where:
  - multiple medical problems present at once
  - multiple health domains are affected
- work out what you can reverse and what you can make better
- produce a management plan.

Figure 11 sums up this process.

Figure 11: Overview of the comprehensive geriatric assessment

Frailty pathway 'tools'

- Identification of frailty – variety of tools being trialled
- Comprehensive geriatric assessment
- Four questions to maintain focus on patient
- Assertive board rounds
  – patient flow
- Clinical criteria for discharge (CCD)
  – clinical coordination
- Expected date of discharge (EDD)
  – clinical coordination
- Metrics/measurements – harm, demand, outcome
- Care note reviews, eg, escalation of 'long-stay' patients

What's an assertive board round?

It's like a 'mini IDT' meetng around the board which focuses on discharge planning. The meeting enables the team to test that the four patient questions are being answered, while also identifying delays and barriers. It ensures all team members know what is happening and what the clinical criteria for discharge are. It's where we challenge ourselves to ensure we aren't holding the patient back – hence the assertiveness.

It is NOT a handover meeting, a traditional IDT meeting or just another meeting which takes up time.

Comprehensive geriatric assessments

are what we do in older people's health. They are a systematic evaluation by the multidisciplinary team, assessing medical, cognitive and social aspects together with level of function. The assessment enables a coordinated plan which emphasises problem-solving aiming to maximise health and function for our patients.

Four patient questions – The team assess these daily

The patient's perspective

I expect what to know and know what to expect from day 0:

- **What is wrong with me?**
- **What is going to happen today and tomorrow?**
- **What needs to be acheived to get me home?**
- **When is this going to happen?**

'No decision about me without me.'

What is the expected date of discharge? (EDD)

- Date set by the team, based on when CCD are likely to be achieved.
- It's then communicated to the patient and family, both as part of daily discussion and written by the patient's bedside.
- It sets expectations for the patient, family and team.
- It allows patients and family to plan around the hospital discharge.
- It can be revised as often as necessary though each change needs to be communicated well with the paitient and/or family.

Assertive board round process and script

Why follow a script?

- Ensures a consistent approach – same process each day for staff to follow.
- A script ensures NO aspects of care planning are missed.
- It ensures a standardised approach so staff moving between wards can follow the same process.
- The script keeps the team on track and also means any member of the team can lead the assertive board round – its success is not reliant on individuals. It's a team approach.
- Ensures all members of the team have an opportunity to provide information while also challenging colleagues to ensure we are doing the best for our patients.

What are clinical criteria for discharge? (CCD)

- Essentially discharge goals, ie, what does the patient have to be able to do before they can be discharged.
- Need to be individualised and take into account usual level of function and supports.
- Combination of functional ability and medical stability, eg, independent with toileting, not requiring oxygen, able to manage two steps.

Note: Where patients can be safely discharged for further assessment we should do so – discharge to assess if safe.

Dressed is best

The United Kingdom is running a national programme known as End Pyjama Paralysis (Twitter: #endPJparalysis), which encourages patients to be dressed and mobile in hospital wherever possible. Some New Zealand DHBs have adopted this approach. See Figure 12 for an example from the Bay of Plenty DHB and see Chapter 7 for further resources.

Figure 12: Adopting the End Pyjama Paralysis approach in New Zealand

Source: Bay of Plenty DHB

Other considerations

- What experience do you have of early identification and proactive care of frail older people in the community – for example, through anticipatory care planning?
- Do you have any examples of how crisis intervention or Hospital at Home schemes affect the frail older person's journey of care?
- In your experience, what is the best way to identify, assess and manage care for the frail older person who is admitted to hospital?
- Thinking of winter demand for beds, how do you think this work focusing on frailty can influence capacity and flow within your organisation?
- How do you demonstrate the impact of a coordinated approach to care for frail older people?

Palliative care

A proportion of patients admitted acutely will be approaching end of life, particularly those with long-term conditions such as COPD and heart failure. Some hospitals are starting to include flags to show repeated admissions within a 12-month period or readmission within 30 days, either of which might suggest that a patient is approaching end-stage disease.

For example, Canterbury DHB now includes flags on its systems to alert teams to a fourth admission within a 12-month period. Such a flag prompts medical, allied health, pharmacy and nursing teams to review medications; investigate the need for a palliative approach; liaise with general practice teams; and check that the patient has an advanced care plan.

For further information on advanced care plans and starting a Conversation that Counts, see:

- the Northern Regional Alliance's Advance Care Planning website www.advancecareplanning.org.nz
- the Ministry of Health's (2017) Palliative Care Action Plan www.health.govt.nz/publication/palliative-care-action-plan

Measures of success

Through effective discharge planning and swiftly managing frail patients, you should:

- reduce lengths of stay
- reduce the number of outliers
- improve patient flow (visible through ED targets)
- reduce the number of patients staying more than 10 days
- improve the satisfaction levels of patients, families and whānau (and staff)
- reduce the number of adverse incidents such as falls, pressure sores and hospital acquired infections
- reduce readmissions.

Good communication between all clinicians within the multidisciplinary team, together with patients and their families and whānau, is crucial to achieving effective discharge management.

Chapter 7: Additional resources

Resources for general practice (Chapter 2)

Case study: Chronic obstructive pulmonary disease programme

Canterbury DHB's Integrated Respiratory Service has developed and implemented new ways of working across the community, primary and secondary respiratory sector since 2007. It has:

- designed a whole-of-system approach to the management of COPD
- moved hospital-standard services such as spirometry and pulmonary rehabilitation to general practice
- improved the management of COPD to reduce the number of bed days to help the DHB cope with the loss of 106 acute beds in the 2011 earthquakes.

Key approaches

- Community providers are conducting spirometry tests, so they can achieve laboratory-quality early diagnosis. This approach supports general practice teams to provide preventive care and access to secondary care as appropriate without needing further diagnostic testing.
- Result: Eleven approved community providers in Canterbury have performed over 5,200 spirometry tests since 2009.
- Community pulmonary rehabilitation programmes have been established throughout Canterbury.
- Result: Over 570 patients were referred in 2014. (More than 95% came from general practice, compared with fewer than 5% before the programme.)
- Work has focused on reducing hospital admissions and bed occupancy for COPD patients following the Christchurch earthquakes.

- Result: One project, 'Getting Ready for Winter', reduced admissions of frequent attenders by 40%.
- St John Ambulance diverts 30% of COPD callouts to appropriate care at general practice or the 24 Hour Surgery.
- COPD Blue Cards document patients' clinical status and care wishes (for ambulance staff). Acute care plans are available to all clinicians involved in the patient's care.
- Acute demand nurses in ED and the Acute Medical Assessment Unit facilitate early transfer of patients to community services (eg, Nurse Maude's Community Rehabilitation Enablement and Support Team, acute demand).

Impacts of COPD management initiatives

Since July 2012, the above initiatives have collectively resulted in almost 500 fewer admissions and over 2,500 fewer bed days in Christchurch Hospital than expected based on previous trends. At inter-district flow (IDF) prices, this is equivalent to savings of almost $1.9 million in total and of approximately $600,000 in the first calendar year. See Table 2 and Figures 13–16 for details.

Table 2: Reductions in admissions, bed days and costs through the COPD management initiatives

	Admissions saved	Bed days saved	Costs saved (IDF prices)
Since 2012	488	2,527	$1,889,736
2014 calendar year	158	1,427	$598,049

Figure 13: COPD admissions compared with projections, 2008–2017

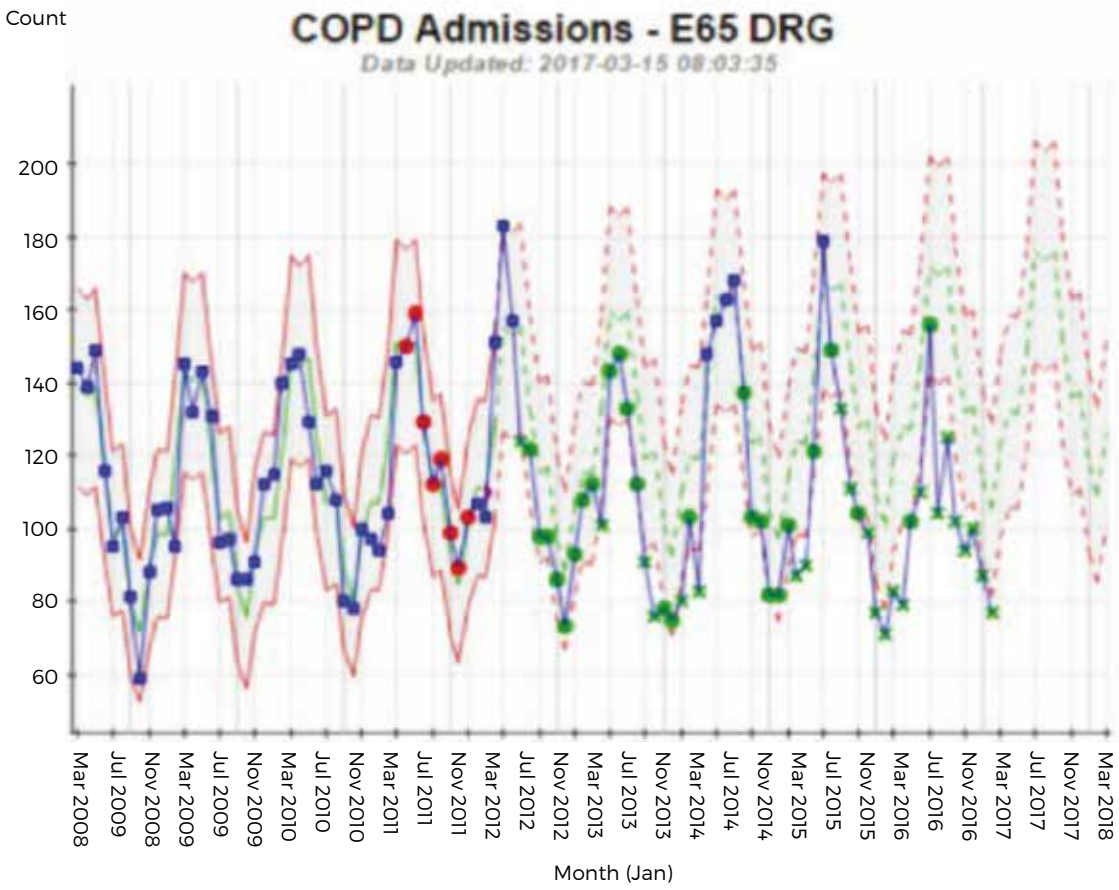


Figure 14: Number of bed days compared with projections, 2008–2017

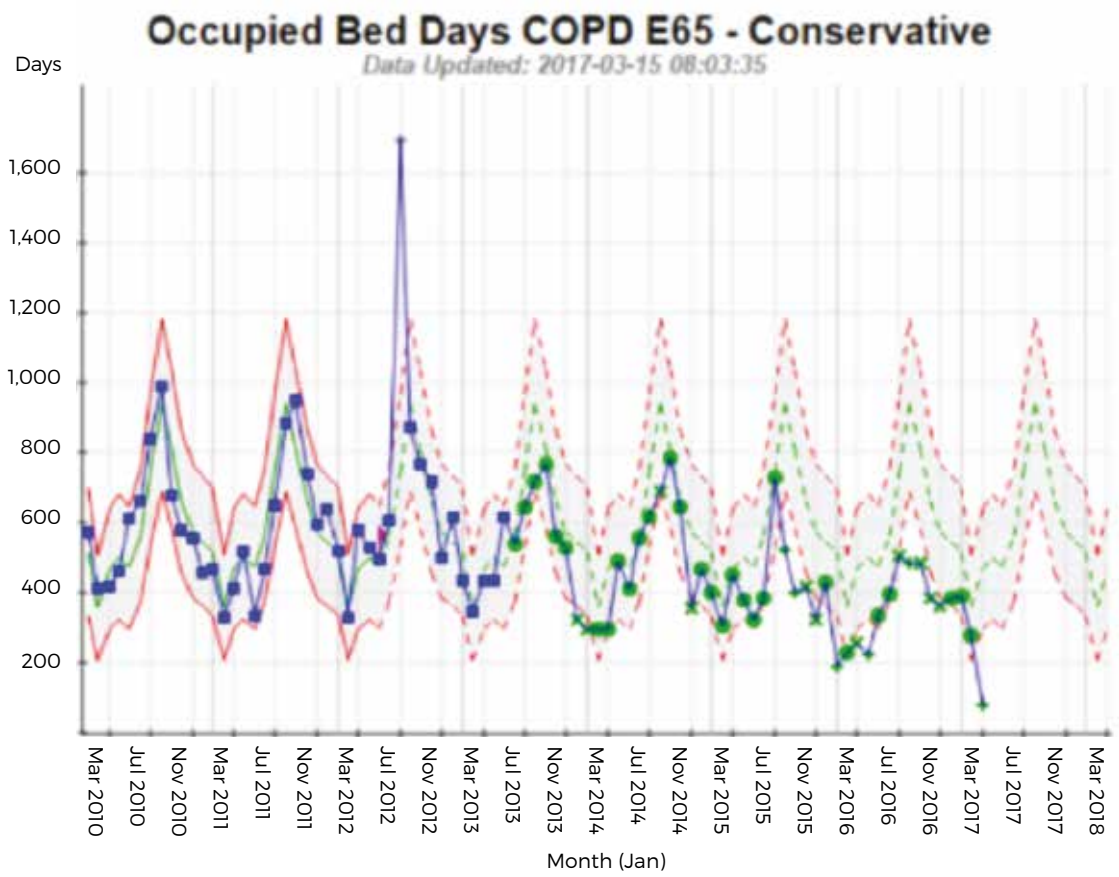
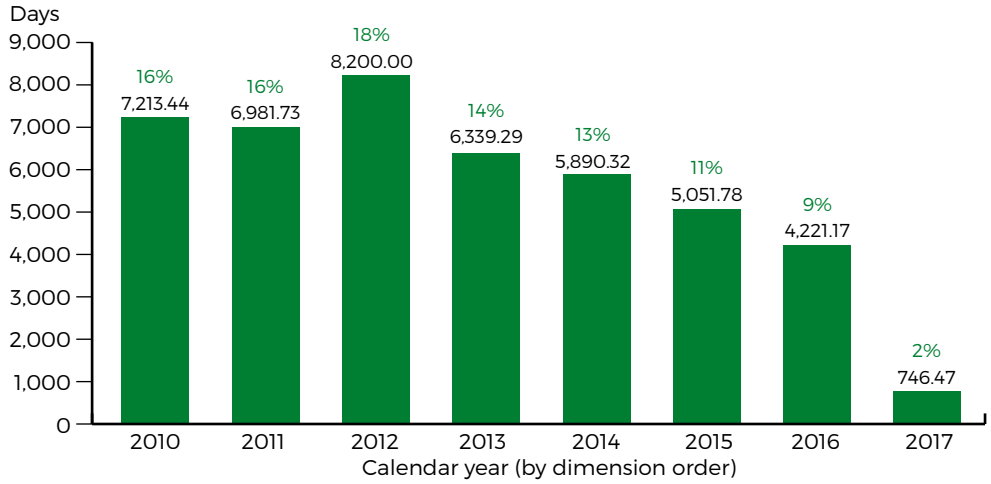
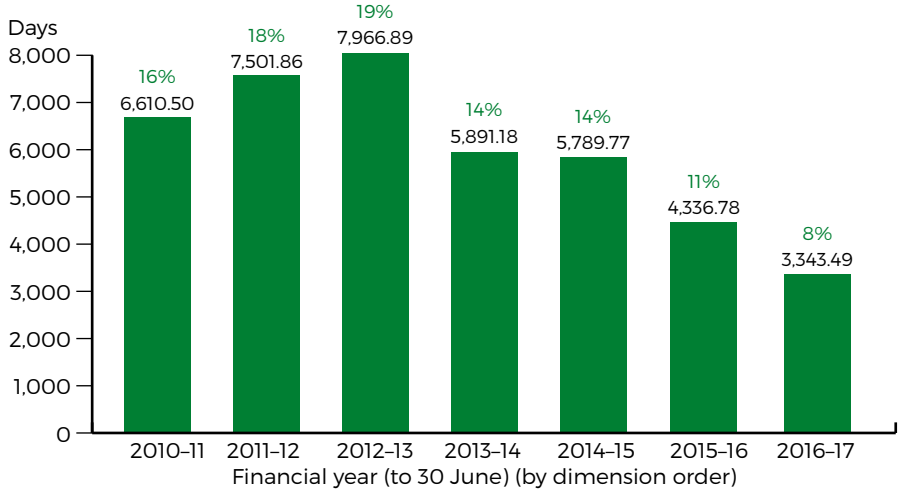


Figure 15: Number of bed days, 2010–2017 (calendar years)



Source: Canterbury DHB

Figure 16: Number of bed days, 2010/11–2016/17 (financial years)



Source: Canterbury DHB

For more information on community-based spirometry, see Epton et al (2015): www.ncbi.nlm.nih.gov/pubmed/25741629

Resources for emergency departments (Chapter 4)

This section presents examples of an ED capacity plan (Figure 17) and a chest pain pathway (Figure 18). (Do you have agreed pathways for common presentations such as fractured neck of femur and chest pain?)

Figure 17: Example of an ED capacity plan

GREEN **Score 0–49**	Normal business
YELLOW **Score 50–89**	• Identify patients in Resus/Monitored and WU suitable for ED Obs admission • Implement better distribution of patients between Resus/Monitored and WU and Ambulatory • Maximise appropriate discharges from ED • Expedite admission process for patients waiting: – Electronic handovers completed – Beds ordered – Liaising with inpatient registrars/SMOs • Ensure active use of fast-track pathways: # NOF, Immunosuppressed patients (Haem/Onc), Orthopaedic injury and joint cellulitis, Women 20+ weeks pregnant • Identify patients who may be able to move to waiting rooms • Clerical: continue normal business, maintain currency of PMS
ORANGE **Score 90–119**	• Ensure yellow tasks complete • Ensure best placement of the 3rd (Ambulatory) SMO • Ensure occupancy of ED Obs maximised • Obtain more RMO medical and nursing resource as appropriate: – SMO to liaise with Service Manager for medical resource – 0800–1630 – ACNM to liaise with CTCs for medical resource – after hours – ACNM to liaise with DNM for nursing resource – 24 hours • ACNM to ask nurses to liaise with wards and request collection of patients requiring escort • Clerical – combine clerical cover for assistance in busiest areas, divert phones as required • Direct teams to liaise with clerical to update PMS – ACCs, discharges, admits, referrals, waiting to be seen and locations

RED **Score 120–149** **Complete the red EDOD card and place in shift report**	• Ensure yellow and orange tasks complete – double-check the computer is up to date • Place referred patients waiting for review who are stable and do not require monitoring into ED Obs – not admitted • ACNM and SMO to meet in Resus and appraise department • Identify the main issues: • Lack of inpatient bed capacity • Overwhelming ED volume • Overloaded specialty registrar/s • SMO to warn St John Shift Coordinator, 027 205 8901, that department is in RED and may need assistance later • Clerical: 0800–2230 – consult with the senior clerical officer; after 2230 – discuss with the ACNM		
1. Lack of inpatient bed capacity	**2. Overwhelming ED volume**	**3. Overloaded specialty registrar/s**	
• ACNM to liaise with Nursing Director of Operations – 08001630 • ACNM to liaise with DNM: request contacting oncall DON, Service Manager and GM – afterhours	• Non-clinical ED medical / nursing staff to assist – 08001630 • Call in ED on-call SMO – Midnight0800 • SMO to consider calling in the short notice relief to start earlier • SMO – SMO admission process • SMO to liaise with: – Service Manager for more medical resource – 08001630 • ACNM to liaise with: – CTCs for more RMO medical resource – after hours, consider calling in the late duty MO on the weekend – DNM for more nursing resource – 24 hours – Clerical lead for assistance in busiest areas	• SMO – SMO admission process • SMO to liaise with: – appropriate specialty SMO /CD/Service Manager to assist in providing support – 08001630 – appropriate specialty registrars to liaise with their SMO – 24 hours • ACNM to liaise with: – CTCs for more RMO medical resource – after hours	

BLACK **Score 150 +** **Complete the black EDOD card and place in shift report**	• Request that the ED CD and NM assist – 24 hours • Non-clinical ED medical / nursing staff to assist – 08001630 • ACNM and SMO to text ED SMOs for assistance • Activate the Ambulance Observation Policy if score ≥ 150 for ≥ 20 minutes – see below • DNM to contact the GM to consider Emergency Operations Centre activation, levels 1, 2 and 3 • Clerical: 0800–2230 – consult with senior Clerical Officer; after 2230 – discuss with ACNM, call Admin Manager if needed

ED OVERLOAD SCORE = BLACK

- ED SMO to call St John Duty Shift Supervisor 24/7 – Phone 027 299 5065 and notify we are activating the Ambulance Observation Policy
- Duty Centre Manager Control Centre – 027 299 5065 as an alternative number

↓

St John will send a Senior Manager to ED to liaise with ambulance officers

↓

- Status 1 and 2 patients to be brought into ED
- Status 3 and 4 patients to remain in ambulance
- St John Ambulance Officer takes patient information to Resus Area Triage Nurse

→ St John Ambulance Manager in liaison with the ACNM to decide if any patients can be taken directly to ED waiting room

↓

Patients kept in ambulances to be moved into ED after maximum 30 minutes delay

ED-SMO to Inpatient-SMO Admission Process

Protocol for patient being sent to the ward by an ED Senior Doctor (SMO or Fellow), when the ED is in red or black overload:

Step ONE: Has the ED SMO personally reviewed the patient?

- Must be: Yes

Step TWO: Does this patient, in the ED SMO's opinion, need admission to an Inpatient Service?

- Must be one of:
  - Unable to safely cope at home. OR
  - Medically too unwell to go home. OR
  - Need for diagnostic work-up.

Step THREE: Is this patient SAFE to go to the ward without Inpatient Registrar review?

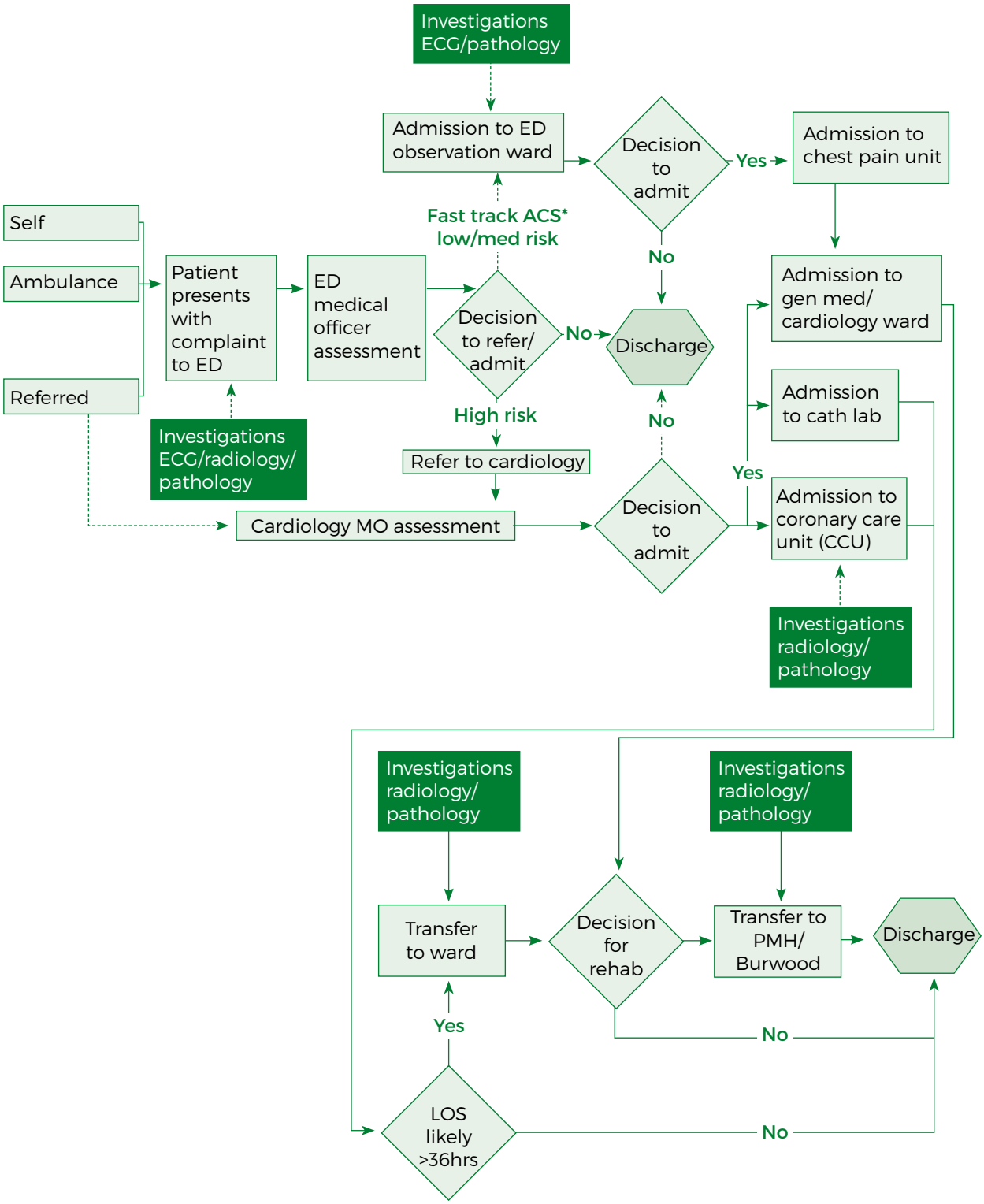
- Must be both:
  - Both the In-Patient SMO and the ED SMO happy to admit? AND
  - If Patient EWS of ≥ 5, or any one score of 3, both the ED SMO and the IP SMO must be aware and happy with this.

Step FOUR: If patient REQUIRES ADMISSION, and is CONSIDERED SAFE then they may go to the ward with agreement from the Inpatient SMO, WITHOUT prior Inpatient Registrar review.

- Actions – ED Senior Doctor must complete all:
  - Discussed with Inpatient SMO.
  - Brief note written on HCS with major issues and plan.
  - Holding orders for fluids, analgesia, and other essential meds for 4 hours written on drug and fluid chart.
  - Nursing handover done on HCS, Bed booked.
  - Inpatient Registrar informed by phone or page.

Notes: # NOF = fractured neck of femur; ACCs = Accident Compensation Corporation patients; ACNM = associate clinical nurse manager; CD = xx; CTCs = xx; DNM = xx; DON = xx; ED = emergency department; EEN = xx; EWS = early warning score; GM = general manager; Haem/Onc = Haematology/Oncology; HCS = xx; IP = xx; MO = medical officer; NM = nurse manager; Obs = observation; PMS = Patient Management System; RMO = resident medical officer; SMO = senior medical officer; WU = work-up

Figure 18: Example of a chest pain pathway



Source: Canterbury DHB

Other useful documents and links

- Christchurch Hospital Emergency Department Shift Report
  www.health.govt.nz/acutedemandtips

Resources for inpatient services (Chapter 6)

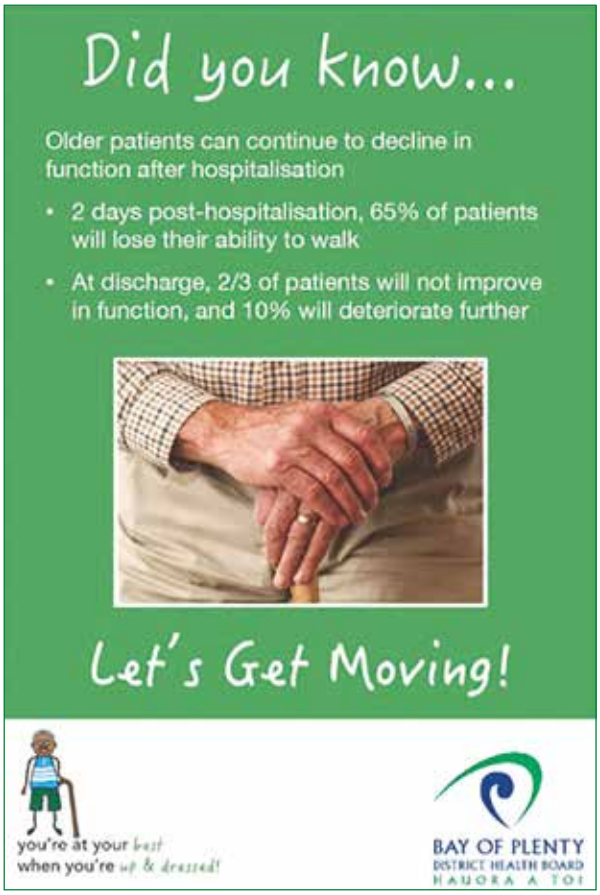
The resources in this section cover examples of:

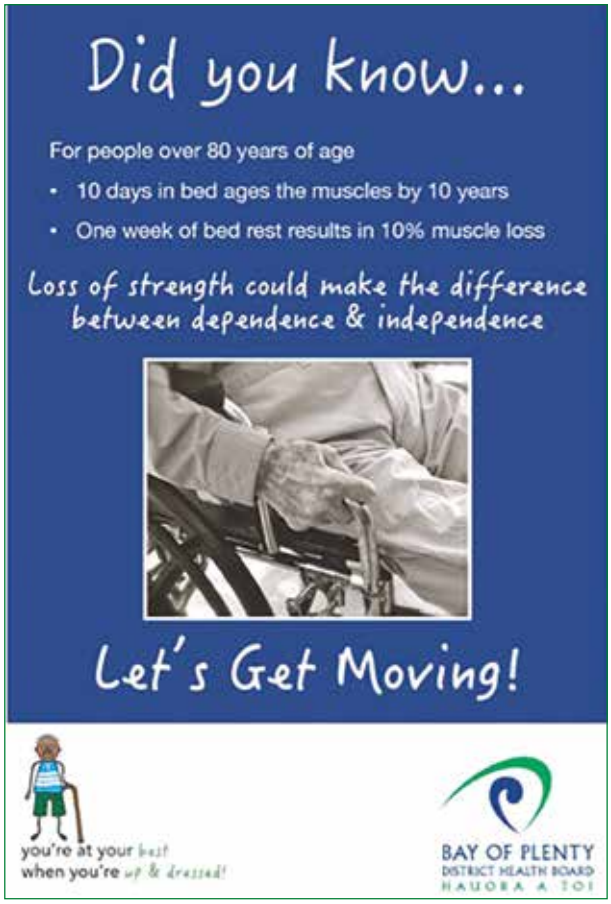
- Bay of Plenty DHB's Dressed Is Best campaign
- Canterbury DHB's Hospital Health Pathways
- clinical criteria for discharge.

Dressed Is Best – Bay of Plenty DHB

As Chapter 6 outlined, Bay of Plenty DHB is one of the DHBs to take up the approach of the United Kingdom's End Pyjama Paralysis programme. Figure 19 presents a range of material from its Dressed Is Best campaign.

Figure 19: Dressed Is Best promotional material





Source: Bay of Plenty DHB

Clinical criteria for discharge

The following examples of clinical criteria for discharge cover general surgery (Figure 21), respiratory medicine (Figure 22) and general medicine (Figure 23).

Figure 20: Example of clinical criteria for discharge – general surgery

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

PATIENT DETAILS
(AFFIX LABEL)

GENERAL SURGICAL - CLINICAL CRITERIA FOR SAFE DISCHARGE

- ☐ Pain controlled on oral analgesia
- ☐ Oral antibiotics (or IV antibiotics with Acute Demand)
- ☐ Recent blood tests reviewed by the medical team
- ☐ Ambulatory or physical function acceptable for discharge destination
- ☐ Taking oral nutrition appropriately (or other method established)
- ☐ Wound clean & dry
- ☐ Satisfactory bladder function
- ☐ *Passing flatus*
- ☐ EWS Score = 0 or 1
- ☐ Follow-up arranged as appropriate (including Allied Health review as appropriate)

Additional Criteria requested by .....(Senior Doctor)

- ☐ e.g. *Overnight support arranged post-anaesthetic*
- ☐ .....
- ☐ .....

Date Completed.....

Name.....

Signature.....

Safe Criteria for Discharge – for trial on Ward 16
Agreed by Grant Coulter
Version 5

3 July 2014

Figure 21: Example of clinical criteria for discharge – respiratory medicine\s

Canterbury
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PATIENT DETAILS
(AFFIX LABEL)

RESPIRATORY MEDICINE - CLINICAL CRITERIA FOR SAFE DISCHARGE

- ☐ Oxygen Saturation above .....% on room air
- ☐ Vital signs stable for 24 hours (mild pyrexia of ≤37.5 acceptable if settling)
- ☐ Oral antibiotics (or IV antibiotics with Acute Demand)
- ☐ Blood tests reviewed
- ☐ Able to walk to the toilet and back safely (using frame / wheelchair / crutches)
- ☐ Off O2 (unless on home O2)
- ☐ Follow-up arranged as appropriate (including Allied Health review as appropriate)
- ☐ Pain controlled on oral analgesia

Additional Criteria requested by .....(Senior Doctor)*
(Please document any additional CCD in Patient Notes)

- ☐ .....
- ☐ .....
- ☐ .....

Date Completed.....

Name.....

Signature.....

Safe Criteria for Discharge agreed by Dr. Greg Frazer on behalf of Respiratory Medicine
Version 2 *22 April 2014*

Figure 22: Example of clinical criteria for discharge – general medicine

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

PATIENT DETAILS
(AFFIX LABEL)

GENERAL MEDICAL - CLINICAL CRITERIA FOR SAFE DISCHARGE

- ☐ Pain controlled on oral analgesia
- ☐ Vital signs stable for 24 hours (mild pyrexia acceptable if settling)
- ☐ Oral antibiotics (or IV antibiotics with Acute Demand)
- ☐ Blood tests reviewed if taken on morning of discharge
- ☐ Able to walk to the toilet and back safely (using frame / wheelchair / crutches)
- ☐ Off O2 (unless on home O2)
- ☐ No episodes of prolonged (more than 15mins) cardiac chest pain in last 24 hours
- ☐ Follow-up arranged as appropriate (including Allied Health review as appropriate)

Additional Criteria requested by .....(Senior Doctor)*
(Please document any additional CCD in Patient Notes)

- ☐ e.g. Oxygen Saturation above .....% on room air
- ☐ .....
- ☐ .....

Date Completed.....

Name.....

Signature.....

Safe Criteria for Discharge agreed by ..... on behalf of the Medical Division
Version 4 *22 April 2014*

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