



Models of Emergency Care

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Foreword

NSW Health has a proud and successful history of providing emergency care.

The clinicians and staff working in our emergency departments, hospitals and in the NSW Ambulance Service play a very important role at the 'sharp-end' of health care service delivery.

However, demand for services is constantly increasing, and the ageing of the population presents new challenges. Despite the expertise and dedication of staff, more money, and advances in technology, the system is still under tremendous pressure.

Individual patient care is good, but systems and processes for co-ordinating care are often outdated and frustrating for patients and health professionals.

We need to change our emergency care system if it is to meet the ever increasing demands and expectations being placed upon it now and in the future.

We need to recognise that there is not a one size fits all system. It is essential to change the roles of health care professionals and the way care is delivered. This will also help to ensure that we create a more satisfying journey for patients and a more satisfying work environment for health professionals.

We need more flexible, patient centred, models of care.

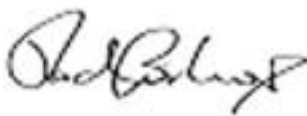
The models of care outlined in this document have been developed as part of NSW Health's Clinical Services Redesign Program (CSRP). CSRP seeks to fundamentally redesign health care systems to ensure that each patient journey is safe and of the highest quality.

This document outlines the models of care required to support the ideal emergency patient journey. It provides examples of local, national and international best practice care.

The models of care outlined in Section 2 have been developed by frontline staff working together with patients and is based on the work of the NSW Health Emergency Care Taskforce who have developed *The Ideal Emergency Department Patient Journey*.

The document was also presented to the Acute Care Taskforce and the Surgical Services Taskforce for review. Comments were also received from other clinicians, consumer representatives and health service managers.

We commend *Models of Emergency Care* to you as a valuable resource.



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Nepean Hospital

St George Hospital

John Hunter Hospital

Royal Prince Alfred Hospital.

Executive summary

The Clinical Services Redesign Program seeks to fundamentally redesign health care systems to ensure that each patient journey is one the patient, their family and health professionals acknowledge is safe and of the highest quality.

Redesign work in Area Health Services is generating new and innovative ways of delivering care that is more patient centred, efficient and satisfying for staff as well as patients. Lessons being gained in a number of sites have commonality in issues and disconnects identified; as well as the solutions which frontline staff have developed. These lessons have been distilled into new ways of delivering care: a Model of Care.

This document presents a distilled set of possible solutions for emergency care, supplemented with experiences from other jurisdictions (national and international) and from the published literature.

This document must be read in the context of the Models of Care being developed for patient flow, aged care, surgery, hospital avoidance and others. Simply attending to Emergency Care issues alone will not create smoother and safer patient journeys.

The NSW Health Emergency Care Taskforce has developed the *Ideal Emergency Department Patient Journey*. It outlines the elements and principles that support the ideal journey of all patients as they travel through an Emergency Department (ED). These principles have been used to underpin new Models of Emergency Care that are focused on changing the way patients are managed. They aim to achieve the following outcomes:

- Streamlining the patient journey and providing alternative options to the current 'one-size-fits-all' system.
- Separating the less complex patient presentations from the sicker, higher acuity presentations in order that they are not delayed by the need for clinicians to see the sickest patient first.
- Removing the disconnects that currently exist in the processes of service delivery and decision-making.
- Early assessment, fast tracking and early initiation of clinical care.
- Providing faster access to care:
 - with an emphasis on the clinical team commencing care, rather than 'waiting to see a doctor' using team-based care and realigning staff roles to ensure quicker flows
 - reducing the total time spent in an ED
 - standardising care to reduce variation for conditions such as chest pain.
- Ensuring the ED adds value to the patient journey – and if not, then ensuring that the patient goes to the appropriate location outside an ED.
- Using short stay beds located outside the ED for patients who need a further period of intensive assessment or investigation and observation but not necessarily admission to a traditional long stay bed.
- Promoting direct to ward admission for certain conditions.

These models include:

- Fast Track zones
- The 3-2-1 Process
- Short Stay Units.

The document also includes a section about alternatives to ED care that includes:

- Community Acute/Post Acute Care (CAPAC)

NSW Health recognises that not all of the components of the Models of Emergency Care are applicable in every emergency department. In particular, smaller, rural and regional EDs may not have the staff, space or patient mix to justify some of these models.

However, the principles outlined above of smooth journeys, separate queues, increasing the skills levels of staff and better management of the processes of care apply equally to every emergency department. Local customisation of the models is vital for successful and sustainable implementation – no matter what size the ED.

A CD-ROM that contains examples of policies, procedures, processes, presentations and training material to assist in local customisation and implementation supports this Models of Emergency Care document.

Section 1. The need for change

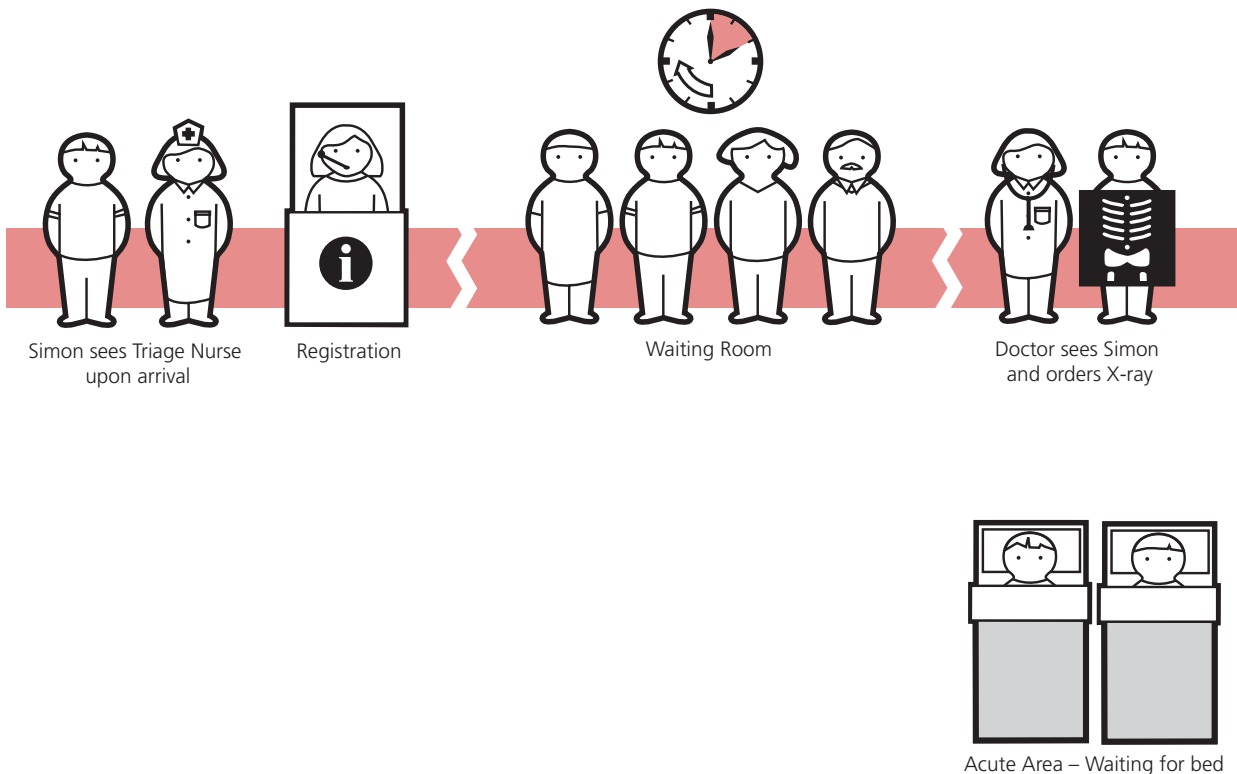
Simon's story

Simon, a 22-year-old rugby player, presented to the Emergency Department (ED) after injuring his ankle during a tackle. He was assessed at Triage and found to have a very painful, swollen ankle that he was just about able to walk on. The Triage nurse allocated him a Triage Category 4 indicating that his problem was semi-urgent but that he was able to wait to see a doctor. Simon was taken back to the waiting room where he had to wait for a doctor to see him. The Emergency Department was busy that day and there were many people waiting to be seen.

Simon waited over an hour and a half for a doctor to examine him. This had to be done on a chair, as there was no bed available. After 15 minutes, the doctor took Simon back to the waiting room and told him that he would order some painkillers and an x-ray. As there was no nurse allocated to the waiting room, the doctor had to hunt for someone who was free to give Simon his painkillers. Simon waited 20 minutes. The x-ray took another hour.

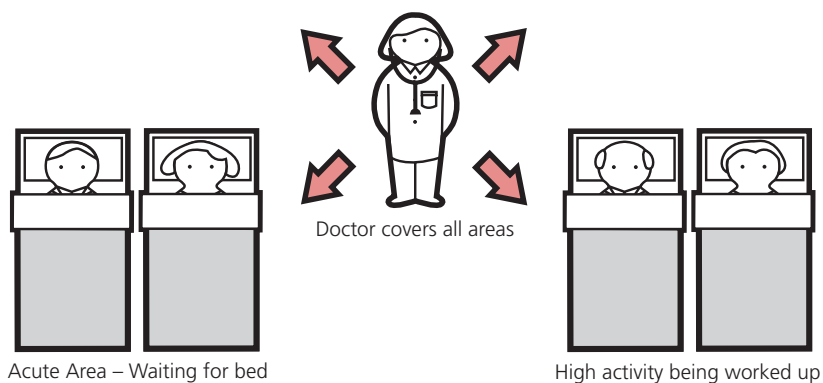
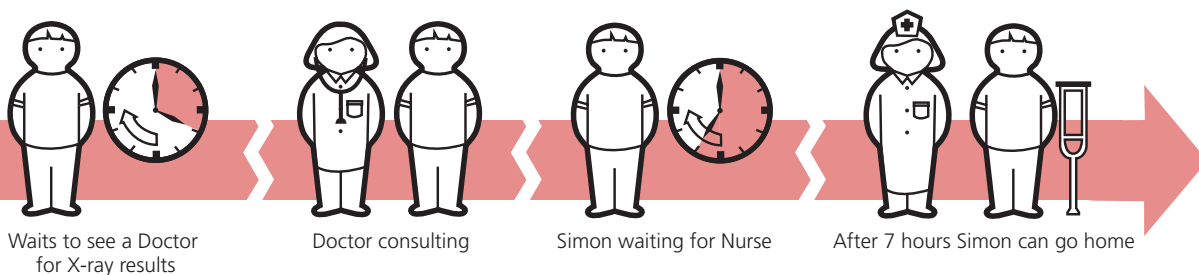
The doctor looking after Simon also had other patients in the acute section of the ED, one of whom had become very unwell and needed to be stabilised. This took some time, so Simon waited and waited some more. After more than five hours, the doctor reviewed the x-ray and found no fracture. Simon was told that he had a bad sprain and that he would need to have a supportive bandage and crutches, and he was given advice about pain relief, rest, ice and elevation. Again the doctor went to find a nurse to undertake the treatment. Simon left the department 7 hours after he arrived.

Simon's journey:




What's wrong with this story?

- Simon had to wait a long time to see a doctor.
- Because Simon's problem was seen as being semi-urgent he had to wait while sicker people were seen, even those who came to the ED long after him.
- No nurse was allocated to the waiting room and Simon had to wait for someone to be free to give him his painkillers.
- There was no doctor allocated to look after patients like Simon who had a minor injury. The doctor who looked after Simon had other patients to care for who were sicker and Simon's treatment was delayed.
- The lack of clinical guidelines to help nurses smooth the progress of Simon's journey in hospital delayed his discharge.
- Simon had to wait many times at different stages for someone to be available and his treatment and discharge from the ED was very delayed.



Total time



7 Hours

- Simon waited 90 minutes to see a Doctor
- No nurse was available so Simon had to wait for pain relief
- The Doctor had other patients so Simon waited 5 hours to be seen by the Doctor again
- Simon waited a total of 7 hours with a simple problem

Frank's story

Frank, a 67-year-old man who is usually fit and well, presented at 10.30pm with a 20-minute episode of stabbing chest pain and mild shortness of breath. When he arrived in the Emergency Department (ED) he was assessed at Triage, given a Triage Category 2 and immediately transferred to a bed. He was given oxygen, placed on a cardiac monitor and had an electrocardiogram. Even though his symptoms settled five minutes after arrival at ED, Frank was assessed by a doctor within ten minutes and a number of blood tests and a chest x-ray were performed.

The doctor found that the pain was not typical of pain caused by heart disease. The first blood test results were quickly returned and were found to be normal. However, Frank had a number of risk factors for heart disease and so he was assessed as having an intermediate risk of developing a significant heart problem that warranted further medical observation. The cardiology team were asked to review Frank. After two hours of waiting to see the specialty team, the doctor decided to admit Frank for observation and further assessment of his chest pain.

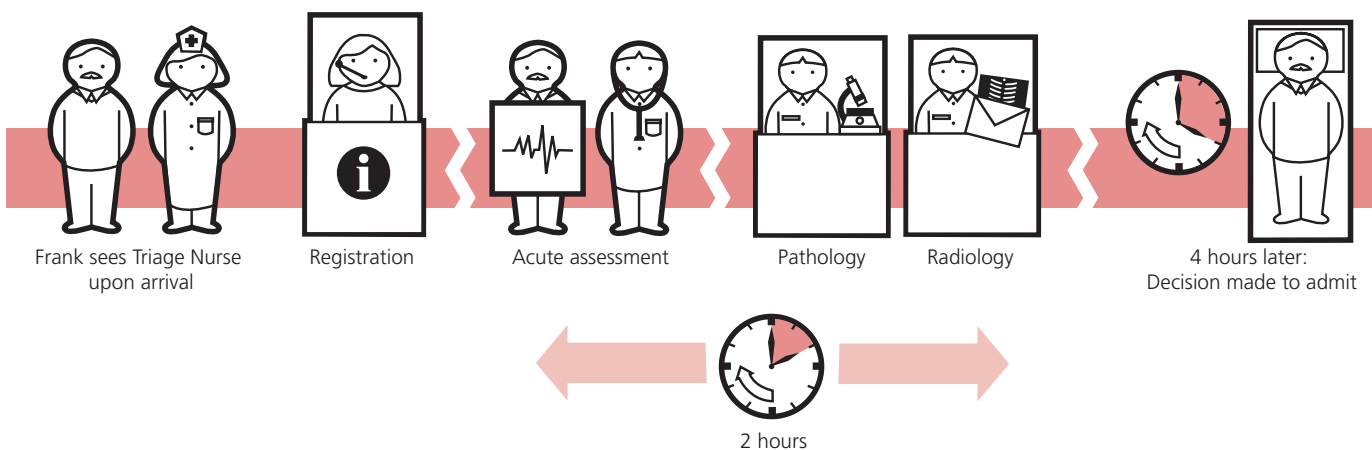
Later, a decision was made to admit Frank to hospital for further observation of his pain and he was placed in a 'queue' for a bed in the cardiac ward. There were no beds available at the time. Frank waited and waited and waited. Meanwhile other patients who came to the ED had delayed access to care because the bed Frank was in could not be used for anyone else.

No one told Frank why he was waiting, what he was waiting for or what care he could expect while he was waiting.

24 hours later a bed became available and Frank was transferred to the ward. Frank stayed in hospital for a further two days waiting for a stress test as there were no appointments available.

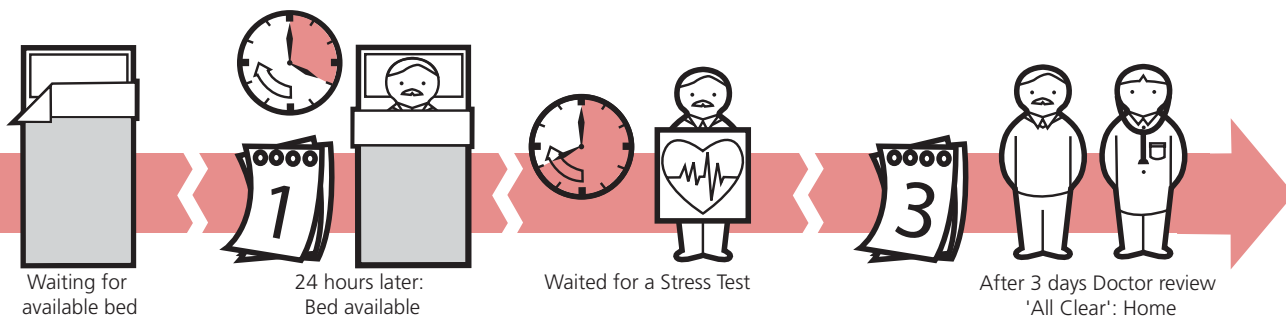
Eventually Frank had his stress test and it was normal. He was discharged home with no evidence of heart disease.

Frank's journey:



What's wrong with this story?

- Frank had to wait for a long time. He waited for a bed and for a test to be performed while he was an in-patient.
- No one communicated clearly with Frank about his care journey, what he could expect to receive during that journey or to check if he had any questions or concerns.
- The only way for Frank to be monitored was by admission to an in-patient ward.
- The lack of guidelines to help nurses expedite Frank's hospital journey delayed his discharge.
- Frank had to wait for a test, and then the results of that test, so that doctors could find out the cause of his pain – this took a long time.
- He spent a long time in the ED when he no longer required their skills.
- Because Frank was delayed in the ED the bed he was in could not be used for other patients.



Total time in ED



3 Days

- Frank waited 24 hours for a hospital bed
- Because Frank was delayed the bed he was in couldn't be used for new ED patients
- Frank waited for a Stress Test before he could go home
 - This routine observation took 3 days

Why did Simon and Frank wait so long?

Traditionally, all Emergency Departments (ED) operate in the same way. Anyone who arrives at an ED, either by Ambulance or by walking through the front door, can expect the same journey.

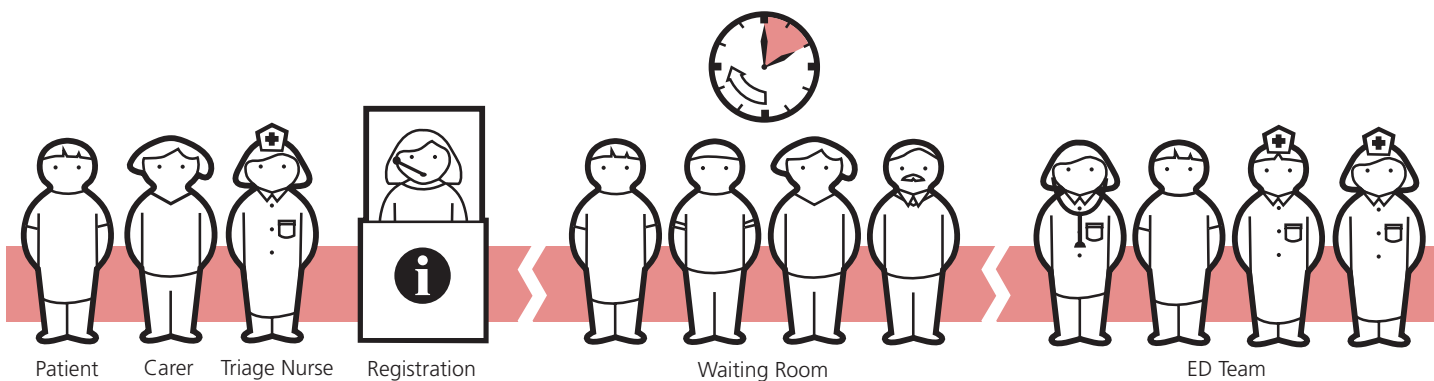
Many people who present to an ED are sick or injured, but don't require immediate medical attention and treatment, like Simon. They get a lower Triage category because it is medically safe for them to wait to be assessed by a doctor. In NSW EDs these patients are allocated a Triage category 4 and overall they represent 40 per cent of the total number of presentations. This makes it difficult to care for patients with urgent health problems.

The diagram below illustrates the 'one-size-fits-all' approach we have traditionally had in EDs in NSW. This model of care has been in operation for many years and pools everyone together irrespective of how unwell they are. This often means that those of lower acuity/urgency are required to wait while the more seriously ill get seen, and are continually shuffled to the back of the queue. The model also relies on the need for patients to wait for a doctor to commence pain relief, diagnosis and treatment. When admission to hospital is required a long stay bed needs to be available.

In Simon's case, his journey through the ED was delayed at several points. He waited to see a doctor because his doctor also had other, sicker patients to care for. There was no other option available for him.

For sicker patients like Frank the only option available is full admission to hospital. It was here that he joined the queue to gain access to a bed in the cardiac ward.

The current ED journey:



Currently ED performance does not meet public expectations, especially in regard to time-to-treatment-commencing for patients with potentially life-threatening and potentially serious conditions. In the majority of EDs unacceptable delays occur in regard not only initial treatment times, but also the overall time in ED, even for non-admitted patients.

The existing care organised in EDs can be limited in terms of its capacity to meet current and future demands. Increasing presentation rates and the volume of aged patients presenting to EDs continues to place demands on existing services. Clinical priorities often mean that those needing the earliest care often need the longest interventions. As the demand to care for sicker patients increases, the availability of resources becomes limited and those of lower acuity/priority experience lengthier delays.

There are a number of imperatives that are highlighted in both Simon's and Frank's stories that identify the need to develop new models of Emergency Care:

- Models of care that streamline the patient journey
- remove the disconnects that currently exist in the processes of service delivery and decision making
- improve the time to treatment by exposing patients to senior clinicians earlier in their time in ED.



Section 2. New models of Emergency Care

Ideal patient journey

The NSW Health Emergency Care Taskforce has developed the *Ideal Emergency Department Journey*. It outlines the elements and principles that support the ideal journey of all patients as they travel through an Emergency Department (ED) in NSW. The ideal journey has been used to develop the new models of care described in this section of the document.

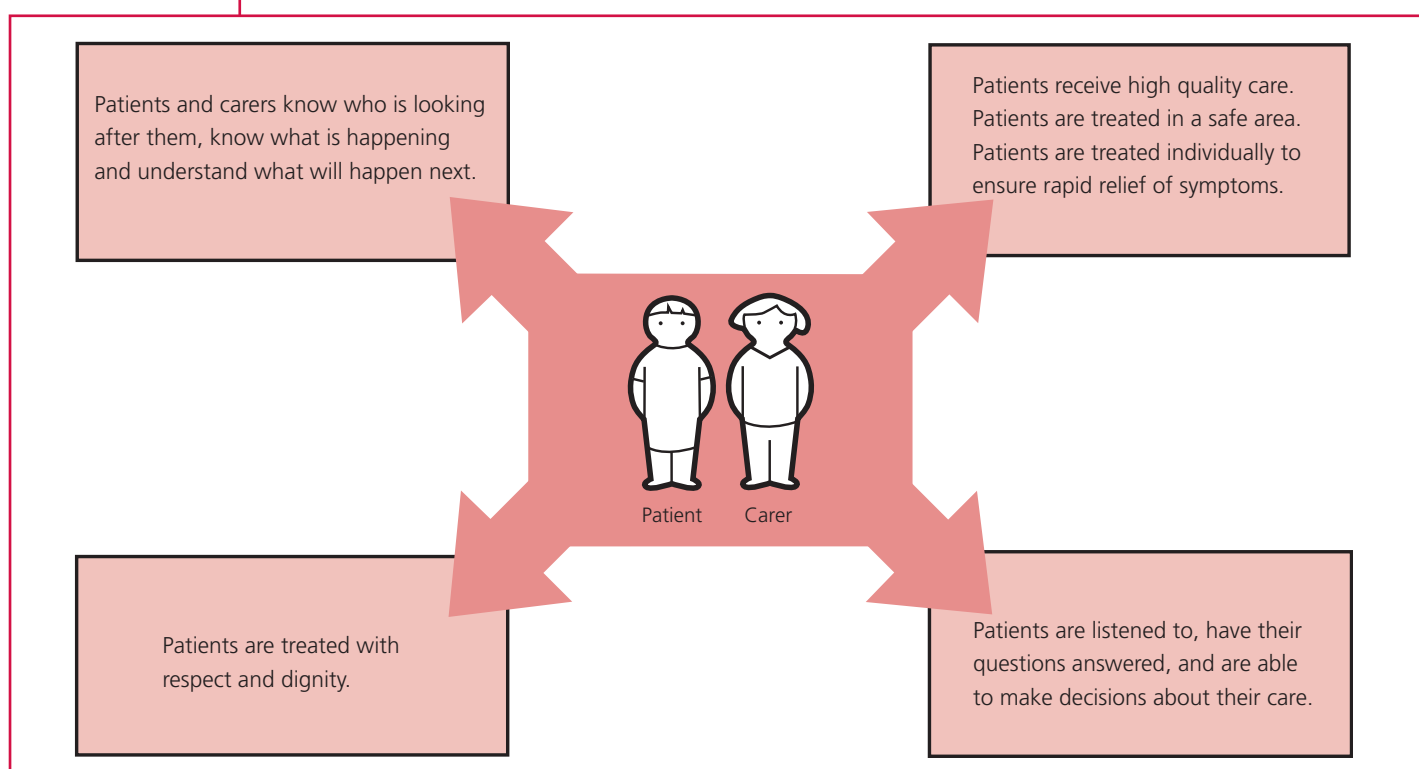
To deliver the ideal journey there must be strict focus on:

- designing patient journeys that focus on the smooth flow of patients
- a team care approach that breaks down traditional silos
- breaking down the journey into manageable chunks so that it can be measured and driven in real time
- strong policing of key performance indicators
- adherence to the principles of the new models of care.

The ideal journey has five key areas:

- Beginning the journey
- Arrival/reception
- Care for non-complex, ambulatory patients (see Fast Track and Triage and Treat models)
- Care for complex, non-ambulatory, high acuity patients (see 3-2-1 process and Short Stay Unit models)
- Special models (see Short Stay Units and Direct Referrals).

The ideal emergency department patient journey facilitates the provision of patient centred care that ensures:



Characteristics

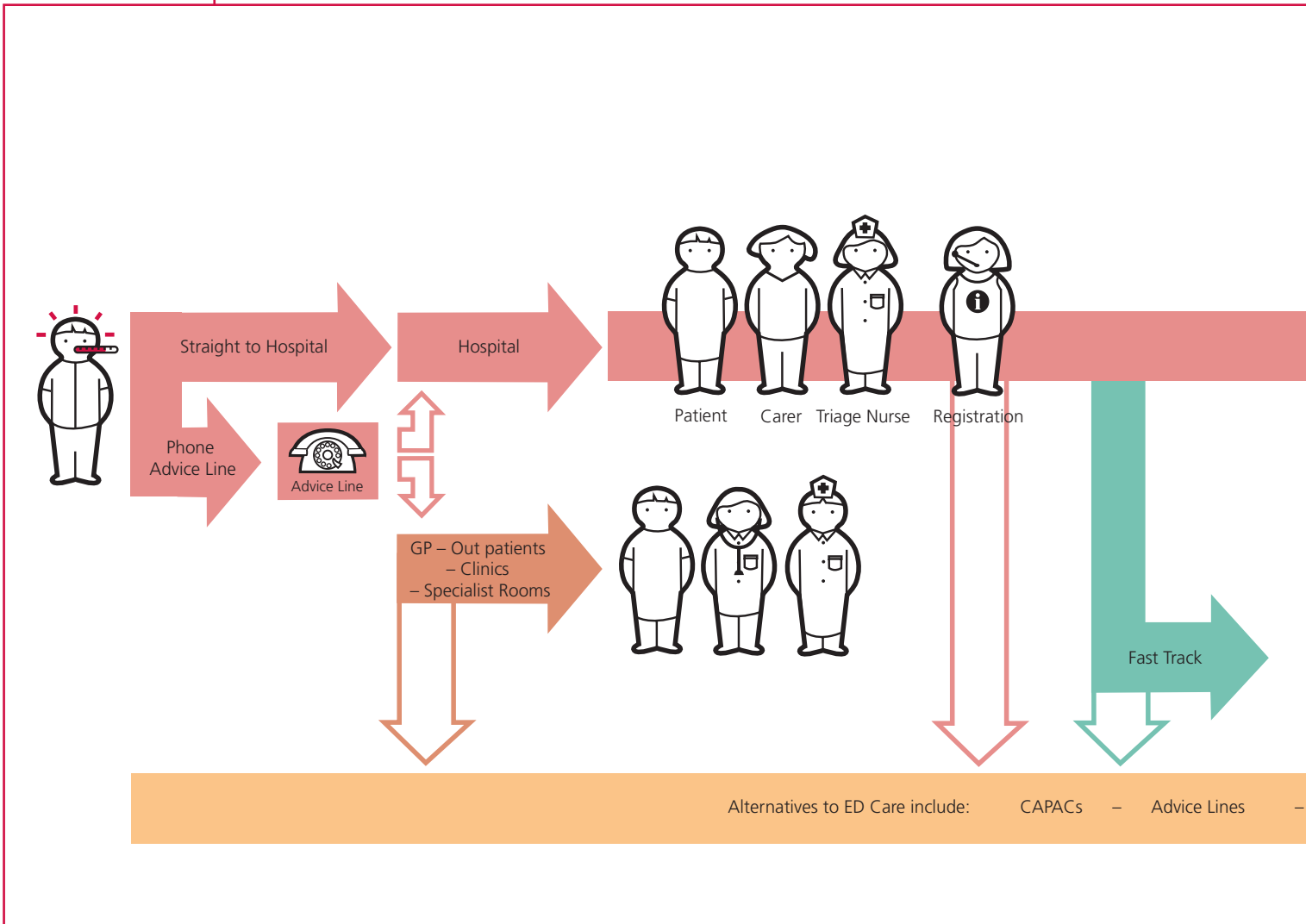
The new models that are being developed for emergency care are focused on changing the way patients are managed as they journey through the ED. They are aimed at:

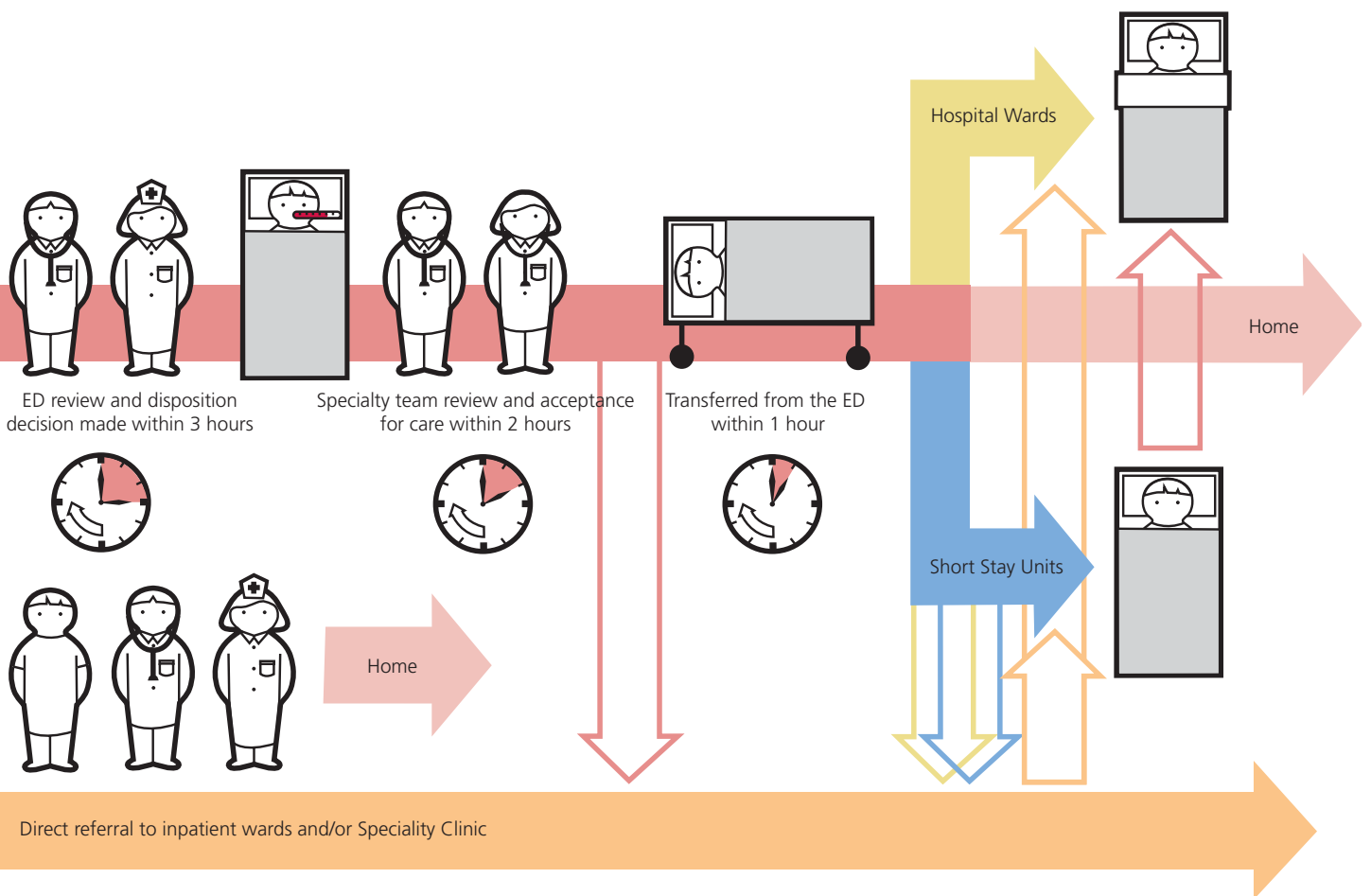
- early assessment, fast tracking and early initiation of clinical care
- reducing the delays that patients currently experience
- providing alternative options to the current 'one-size-fits-all' system
- providing appropriate locations outside the ED for patients who need only a short stay admission
- using short stay beds for patients who need a further period of intensive assessment or investigation and observation but not necessarily admission to a traditional long stay bed
- ensuring that people with minor injuries/illness are treated and discharged in a more efficient way
- promoting direct to ward admission for certain conditions
- realigning staff roles to ensure quicker flows
- increasing the use of the skills and experience of clinical staff to commence investigations and treatment whilst patients are waiting to see a doctor
- provide faster access to care:
 - with an emphasis on the clinical team commencing care, rather than 'waiting to see a doctor'
 - reducing the total time spent in an ED
 - standardising care to reduce variation for conditions such as chest pain.

Ideal patient journey

The diagram below illustrates the new way in which patients will flow through an ED in a NSW hospital. The emphasis is to stream patients into the most appropriate model of care for them and provide alternatives to the 'one-size-fits-all' model that is currently in place. These models include Fast Track zones, 3-2-1 Process, Short Stay Units and CAPACs.

The new journey:





Beginning the journey

A patient's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Self-presenting patients should understand the role of an ED and how they can best access the health care they require. This will involve improving community awareness of all parts of the health care sector and improving access to alternatives to emergency department care for non-urgent conditions.
- Ambulance transports should conform to agreed policies in regards receiving hospital eg NSW Ambulance Matrix, trauma bypass.
- Referrals from GPs and Specialists should be limited to patients requiring ED care. Alternative pathways should exist for patients requiring non-emergency specialist review and patients suitable for direct admission from doctors' rooms.
- Other services should not use the ED as an alternate provider to cover periods of closure/leave/non-availability.

Arrival/ reception

A patient's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Triage by an experienced senior clinician at the time of arrival (this relates to registered nurses and medical officers).
- Appropriate initial management commenced by clinical staff within Triage benchmark time.
- Clinical pathways for common presentations.
- Emphasis on clinical team commencing care, rather than 'waiting to see a doctor'.
- Timely and appropriate clerical registration.
- Rapid access to existing medical information and risk alerts.
- Patient placed in an appropriate clinical area.
 - Mode of arrival should not determine priority for Triage and placement in a clinical area.

It is vital to get the patient journey started at the right time, in the right way. The elements of the ideal ED patient journey identified above define what should occur in order to facilitate that journey.

There are times when patients will wait, especially when there is a great deal of unexpected demand for services. However, it is imperative that someone has the responsibility for patients, particularly in terms of regular re-evaluation and assessment and the initiation of appropriate clinical care. It is also important that waiting patients know that they have someone looking after them.

Currently, this group of patients experience significant delays with regard to timely access to a medical officer, symptom management, timely decision making and total treatment time. Improving the time to treatment by exposing the patient to senior nurses with extended skills earlier in their time in ED is an effective strategy in optimising patient flow.

The use of nurses with extended skills provides significant utility in the ideal ED patient journey. This fits well with the new models of care in regard to early assessment, fast tracking and early initiation of clinical care for:

- patients who are allocated to the waiting room
- Fast Track patients
- those who are suitable for Triage and Treat.

The effectiveness of these senior roles requires a focus on:

- re-triaging and reprioritising patients who are in the waiting room
- undertaking a further assessment of waiting patients and instigating relevant observations where clinically appropriate
- early symptom relief
- undertaking cannulation and venepuncture and initiating standing order protocols eg pain relief, pathology testing
- ordering x-rays where clinically indicated and in accordance with protocols
- expediting patients into the main clinical areas when a worsening change of condition has or is likely to occur.

Nursing staff that provide access to clinical care early in the patient journey should have:

- significant seniority, experience and confidence to practice in an extended clinical role, balanced with judgement to seek advice when appropriate
- highly developed Triage assessment skills
- competency in cannulation and venepuncture
- well developed patient assessment skills (particularly in cardiac, respiratory and abdominal assessment)
- competency against local clinical order protocols
- corporate knowledge of the ED (role and function, policy and work practice).

In order to minimise the potential for role ambiguity it is essential that the role has a clear scope of practice, is focused on the front of house and the initiation of clinical care, and has access to clinical order protocol/standing orders that facilitate the provision of appropriate and safe care.

Key elements from the ideal patient journey

A patient's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Appropriate initial management commenced by clinical staff within triage benchmark time.
- Defined Clinical pathways for common presentations.
- Emphasis on clinical team commencing care, rather than 'waiting to see a doctor'.

Key principles

- Patients are managed by nursing staff who have been assessed as being competent and able to make a safe and appropriate decision about needs and care requirements.
- Non emergency patients are managed as they arrive and do not join the queue.
- There is a focus on ensuring that those presenting with a non-emergency problem are educated about future alternative options for care.

Why use triage and treat?

There is a subset of patients who present to an ED who have very limited clinical care requirements. This subset of patients often do not require an assessment by a Emergency Department Medical Officer, would gain no benefit from joining the queue and can be safely managed by experienced nursing staff management protocols.

These include patients who generally fulfil the criteria for Triage 5 and may include those who present for:

- removal of sutures or wound care management (dressings)
- very minor cuts and abrasions
- immunisations
- blood tests
- plaster problems
- direct referral.

What is triage and treat?

Triage and Treat is a process by which senior nursing staff are able to manage a predefined group of patients who present with non-urgent/non-emergency problems. Triage and Treat is protocol-based clinical care and management, aimed at early and appropriate discharge from the ED by a senior clinical nurse using extended skills or, alternatively, a nurse practitioner could treat and discharge.

Triage and Treat has these characteristics:

- Assessment of a presenting problem at Triage against a set of predetermined criteria which filters patients with non-emergency problems out of the queue.
- Protocols are available that:
 - have clearly defined inclusion and exclusion criteria
 - are based on problem pathways that nursing staff can use in the management of patients presenting for a specific reason
 - support nursing staff in managing the episode of care for patients with a limited range of problems and set out both documentation requirements and consultation requirements eg consultation with a senior clinician before discharge
 - assess senior nursing staff for competency and give local authority to practice.
- Patients allocated to Triage and Treat have simple health issues and do not require assessment by a doctor.
- Recognition that the faster simple problems are managed, the less they will impact on the level of crowding in an ED.

	What do you need to get it to work?
Patient selection criteria	<ul style="list-style-type: none"> • Identify common ‘non-emergency’ presentations to the ED. • Develop a policy and procedure to manage and stream non-emergency patients. • Include a set of criteria developed to identify and stream those who (at Triage) have little or no clinical care requirements and do not require assessment by an ED Medical Officer. The criteria should list inclusions and exclusions and have clear timelines for management. • Assessment against the criteria should include an assessment of vital signs, age limits, mobility and absence of co-morbidities.
Senior nursing staff	<ul style="list-style-type: none"> • Nurse Practitioners have extensive experience, skills and knowledge in their specialty and are ideally placed to not only manage patients in the Fast Track environment but also in Triage and Treat. • Identify senior nursing staff who have extended skills who have been assessed as having competency in management of a range of presenting problems and have been given local authority to manage a group of predefined conditions. • Nursing staff should have demonstrated: <ul style="list-style-type: none"> – patient assessment skills – extended skills (including plaster of Paris application, venipuncture) – effective documentation skills – effective discharge knowledge.
Operational policies and clinical protocols	<ul style="list-style-type: none"> • Ensure Triage and Treat is well defined and understood by all staff. • Detail the types of complaint/conditions and clinical management regimes handled under the Triage and Treat model. • Develop management protocols for each presentation group. • Ensure clear lines of responsibility and strong policing.

Key elements from the ideal patient journey

Simon's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Separate stream with dedicated staff (Ambulatory Fast Track).
- Senior clinical staff capable of independently managing and discharging the majority of patients.
- Rapid access to appropriate imaging and pathology.
- Aim to discharge within 2 hours.
- Easy access to speciality outpatient referral.
- Easy access to GP and community care.

Key principles

- Expedite the journey for patients not needing immediate assessment and care.
- Patients with non-urgent conditions are treated in a dedicated area by dedicated staff.
- Uses quarantined space.
- Treatment commences early.

Why use them?

Fast Track zones provide an alternative option for emergency care and provide access to timely care for those with minor injury or illness. Cooke et al (2003) observe that when applying operation research theory, waiting time in a system utilising one queue can be reduced by attending to those with the shortest time requirements. A number of studies have found that Fast Track reduced the total waiting time by 30 per cent and improved patient flow through the system. (Al Darrab, Fan, Fernandez, Zimmerman, Smith, Woster, Smith & O'Connor 2006: Cooke, Wilson & Pearson 2002).

What is Fast Track?

On arrival at Triage patients are assessed against pre-determined criteria that identify them as ambulatory, non-complex, and with the potential to have their emergency care initiated using clinical treatment protocols by the clinical team. These patients are treated in the Fast Track zone.

Fast Track zones increase ED throughput by creating specialised systems designed to:

- expedite the care of ambulatory patients with non-urgent conditions (Al Darrab et al. 2006: Taylor 2004)
- divert the care of patients who meet particular clinical criteria through a separate stream in the ED (Cooke et al. 2003)
- provide a dedicated staffed area with senior clinicians who have the competence to make discharge decisions (Cooke et al. 2003: Taylor 2004: Emergency Service Collaborative p.8, 2002)
- provide care that is protocol driven and directed e.g. for minor illness and injuries.

In Fast Track zones the emphasis is on a clinical team commencing care, rather than 'waiting to see a doctor'. The aim is discharge within two hours of presentation for non-admitted lower acuity patients.

Advantages

There are a number of advantages of Fast Track zones.

- They have a demonstrable impact on the waiting time for care and the total time in the ED.
- Fast Track zones provide an environment where patients are assessed, investigations are arranged and treatment can be completed away from the main part of the ED.
- The use of treatment protocols promotes patient safety and allows for nurse-initiated management of low acuity patients who meet well-defined criteria.
- A properly designed ambulatory Fast Track area and re-engineering of existing staff roles (including nursing, medical and clinical support roles) facilitates provision of 'directed care'. That is the provision of protocol driven treatment plans developed to guide the management of specific presentations.
- Patients are seen faster and are more satisfied with their care (Cooke & Fisher, p.83, 2004).
- Prevents excessively long waits, reduces length of stay and reduces 'walk outs' (Al Darrab et al. 2006).
- Patients treated by a nurse practitioner may have all their care, including discharge, by one clinician.

Cost considerations

Key elements of Fast Track zones are the quarantining of space and staff, and the realigning of roles to provide a separate stream of patient management. The set up requirements and costs will vary significantly. Some units may have existing staffed areas of the department (eg sub-acute, consult areas and minor injury units) that may be modified to set up a Fast Track zone. In these instances set up involves development of selection criteria and business rules for the use of Fast Track, the development of clinical protocols (if not already available) and the other elements identified above. In other units set up needs to occur from the beginning and may require a commitment to capital and staffing costs.

The costs associated with the setting up of Fast Track zones are dependant on factors such as:

- the staffing profile required
- the availability of physical space
- equipment availability.

Fast Track zones

What do you need to get them to work?

Patient selection criteria

- Develop a policy for the management of Fast Track. This should include a set of criteria developed to stream patients from Triage to Fast Track (Emergency Services Collaborative, p.5, 2002).
- Criteria should include those patients who (at Triage) have limited care/clinical management requirements and who are likely to be discharged home after a brief amount of care from ED staff.
- The criteria should outline inclusions and exclusions and have clear timelines for care and specialty review.

See attached criteria from John Hunter, Nepean and The Austin hospitals on CD-Rom.

Dedicated physical space

- Separate the zone from the rest of the department in close proximity to the waiting, plaster, and procedure rooms (Cooke 2004: Emergency Services Collaborative 2002).
- Configuration varies significantly. Zones can range from having designated access to 2 cubicles to a specifically designed and segregated treatment area.
- The physical requirements will depend on the volume of patients likely to be managed in the area, the policies that drive practice and the maintenance of effective flow.

Consider:

- the proximity to key areas of the existing ED including radiology, plaster room and waiting rooms
- the number of treatment spaces needed to optimise the use of the area
- the need for specific treatment areas (such as minor procedures and eye rooms) and a sub-waiting area
- write up areas and workspace for clinicians.

Designated staff

- Dedicated senior clinicians who are competent to make fast and safe decisions about treatment, investigations and discharge. This could include emergency physicians, advanced trainee registrars, appropriately trained and skilled CMOs or nurse practitioners (Emergency Services Collaborative, p.8, 2002).
- Dedicated nursing staff with clearly defined roles and responsibilities (Cooke Wilson and Pearson 2002).
- Staff that understand the key principles and process of Fast Track (Cooke et al 2004: Emergency Services Collaborative 2002).
- Analyse the units current staffing profile to identify whether existing positions can be re-aligned to divert staff to this area or if new staff are required.
- The role of Physiotherapists who have local authority to order x-rays should also be considered.
- The staffing profile will vary depending on the skill mix within each ED.
- Consider access to clinical support staff such as administrative staff and wardsmen.

	What do you need to get them to work?
Designated staff	<ul style="list-style-type: none"> Develop position descriptions to provide role clarity for staff. <p>See attached criteria from John Hunter, Nepean and The Austin hospitals on CD-Rom.</p>
Nurse Practitioner	<p>Nurse practitioners have proven to be effective in management of patients in the Fast Track and the minor injury setting (Sakr, Perrin, Nixon, Nicholl and Wardhope 1999). They:</p> <ul style="list-style-type: none"> have a clearly defined expert scope of practice that assists them to deliver high quality, patient centred care and can reduce the fragmentation of care provide expert nursing care by working with high level of clinical decision making expertise in collaboration with other health professionals and are able to manage the total patient journey from presentation to discharge.
Scope of, and rules for, treatment	<ul style="list-style-type: none"> Develop business rules to ensure that flow is maintained. Include details about the types of complaint/conditions and clinical management regimes that are handled in the area. Limit treatments to those with short treatment timelines and stat therapies. Avoid treatments such as IV infusions that have the potential to block the area. Ensure flow through the unit is constant. Patients should not wait within the assessment areas for review. Those who need to wait for re-evaluation should do so in the waiting area. Ensure strong management and policing of operational policies. <p>See attached criteria from John Hunter, Nepean and The Austin hospitals on CD-Rom.</p>
Extended skills	<ul style="list-style-type: none"> Have clinical protocols that promote early initiation of care by senior clinicians. Standing order protocols for the management of conditions including sprains and strains, minor wound management, tetanus prophylaxis, and nurse-initiated analgesia, are examples of those used in Fast Track zones. Nursing staff should have or have access to staff with skill and competency in the application of plaster of Paris, suturing, cannulation, venipuncture, and physical assessment. Consider the availability and skill level of other disciplines of staff such as endorsed ENs who are accredited to administer IMI medication and oral S4 medications. <p>See attached criteria from John Hunter, Nepean and The Austin hospitals on CD-Rom.</p>
Time targets/ Breach management	<p>Develop key performance indicators (KPIs) to assess the effectiveness of the flow of patients through Fast Track. Include the following KPIs:</p> <ul style="list-style-type: none"> Time to commencement of treatment (Triage benchmark). Include nurse seen time where care has been initiated under a clinical order protocol. Total time in ED. (The aim is discharge within 2 hours of presentation.) Implement monitoring systems to track each patient travelling through Fast Track. Breaches over 2 hours should be monitored and patients managed through the system.

Fast Track zones

Fast Track zones

What do you need to get them to work?

Access to diagnostic services

- Engagement of diagnostic services (Radiology and Pathology) is essential. Diagnostic staff need to be involved in the development of process maps to fast track patients through their service and to agree upon turn-around-times for both radiology and pathology testing and results.
- Consider pre-booked slots in radiology based on historical throughput for Fast Track patients.

Equipment needs

The equipment needs will vary based on the mix of patients and the existing availability present in each ED.

- Assessment couches. Consider using equipment that will limit its use by non-Fast Track patients eg static examination couches will reduce the potential for non-Fast Track patients to block the area, but provide good access for clinical staff to adequately examine patients.
- Procedure trolleys and examination light sources
- Slit lamp and other ophthalmology equipment
- ENT equipment
- Ophthalmoscope and otoscopes
- Plastering equipment
- Suture sets
- Dressing and wound care materials
- Splinting and supportive bandages
- Vital sign monitor
- BSL machine
- PC access and ED tracking software
- Pharmacy fridge
- Wheelchairs.

Where are Fast Track zones working now?

Fast track zones are working in a number of EDs including:

- John Hunter Hospital
- Nepean Hospital
- St George Hospital
- Austin Repatriation General Hospital, Melbourne.

Simon's new story

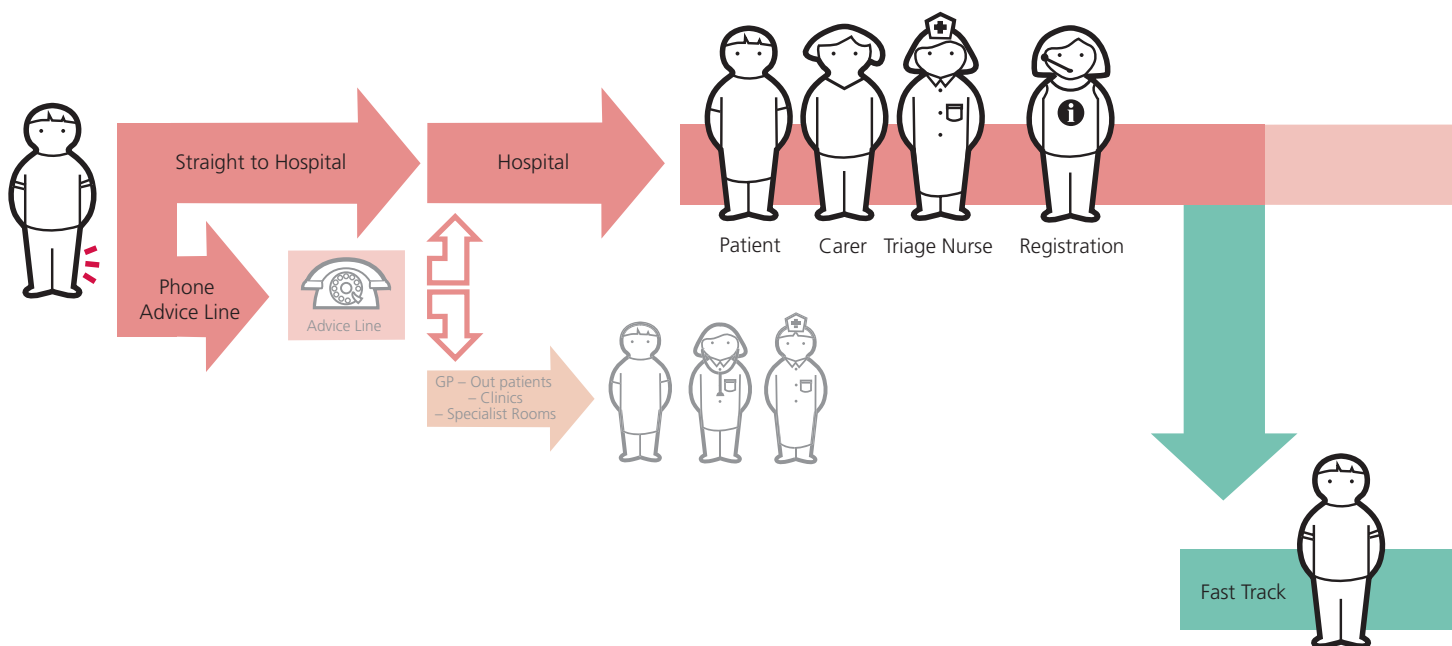
Simon, a 22-year-old rugby player, presented to the ED after injuring his ankle during a rugby tackle. He was assessed at Triage and found to have a very painful, swollen ankle that he was just about able to walk on it. The Triage Nurse allocated him a Triage Category 4 and called a Senior Clinical Nurse to assess him further. The nurse took Simon to the Fast Track zone and examined his ankle using Ottawa ankle rules, gave him pain relief and ordered an x-ray. The wardman took Simon to the X-Ray Department.

On his return to the Fast Track zone Simon was placed in a cubicle where the Fast Track doctor was able to examine him and to review his x-ray. No fracture was found. Simon was told that he had a bad sprain and that he would need to have a supportive bandage and crutches. He was given advice about pain relief, rest, ice and elevation.

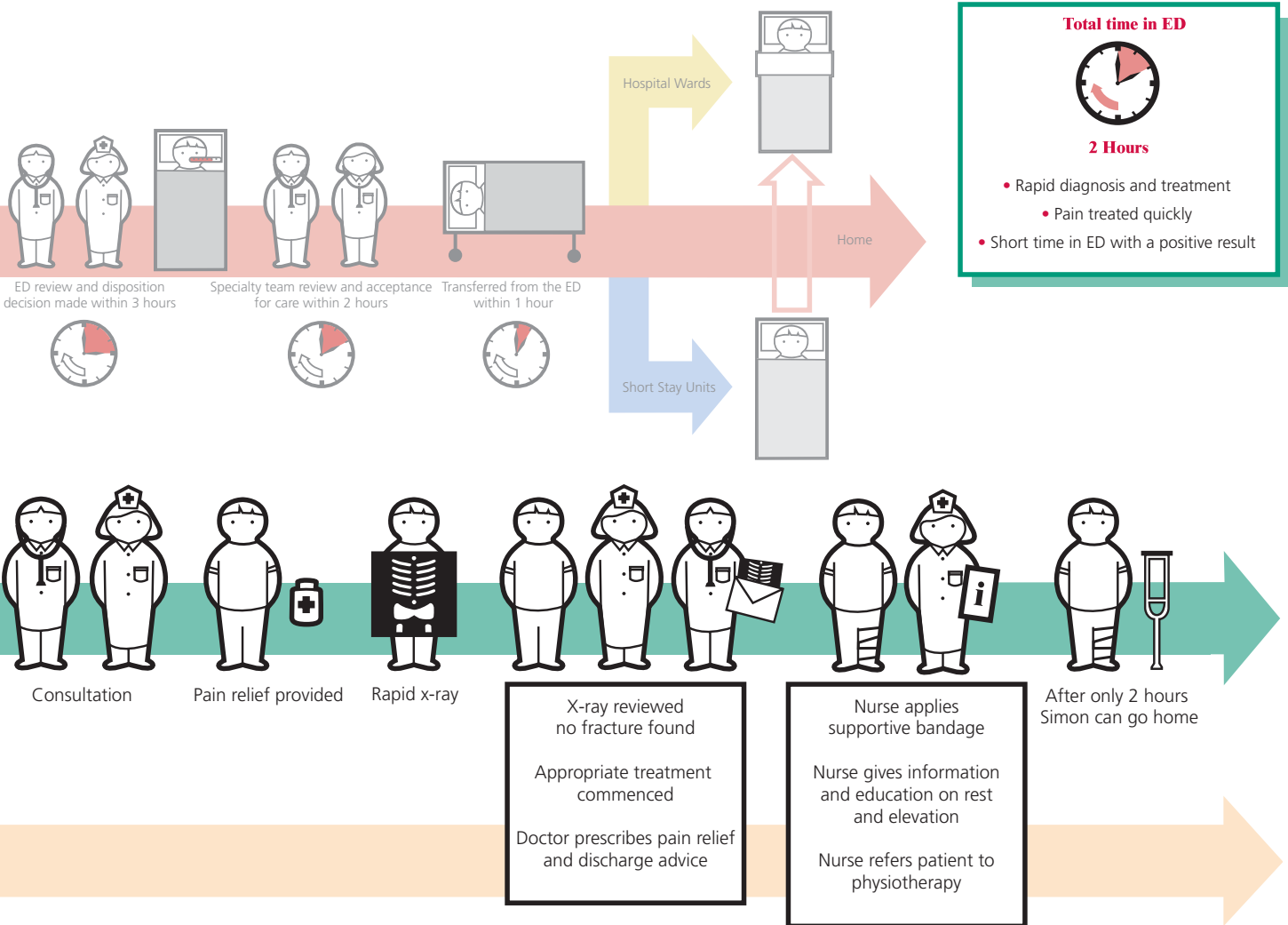
The nurse working in the Fast Track zone applied a supportive bandage, gave Simon crutches and an ankle injury care sheet. Simon was discharged from the ED less than two hours after he arrived.

Alternatively Simons entire journey, from arrival to discharge, could be managed by a Nurse Practitioner.

Simon's new journey:



Alternatives to ED Care include: CAPACs – Advice Lines – Direct referral to inpatient wards and/or Speciality Clinic



Key elements from the ideal patient journey

Frank's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Separate stream with dedicated staff (acute care).
 - This may be broken down to further streams of care based on patient needs and likely disposition, including the ability to fast track patients to inpatient care.
- Early review by senior medical staff capable of:
 - defining clinical problem
 - ordering focussed investigations
 - initiating timely and appropriate clinical interventions
 - predicting likely disposition (admit/discharge).
- Timely access to imaging/pathology required to define initial care and disposition.
- Timely access to Pharmacy support.
- Timely access to Allied Health Services.
- Standardised work up for risk assessment presentations (eg headache, chest pain, fever).
- Aim appropriate disposition within 3 hours, not necessarily definitive diagnosis.
 - ADMIT to inpatient ward
 - Timely (2 hours) inpatient unit consultation and acceptance of care.
 - Should the two hour timeframe be breached, ED decision to admit and transfer care.
 - Rapid movement to inpatient bed once decision to admit is made (1 hour).
 - TRANSFER
 - Clear lines of communication between referring and accepting staff.
 - Timely acceptance by receiving hospital based on clinical urgency.
 - Access to appropriate modes of transport and appropriate escorting clinical staff.
 - DISCHARGE
 - Easy access to ambulatory, community and GP services.
 - Defined discharge processes and access to required transport.

Key principles

- Key time points of the complex high-acuity patient journey are defined and are used to manage patient flow: decision to admit (<3 hours) – acceptance for care (<2 hours) – transfer (<1 hour). Alternatively, for patient suitable for discharge: Disposition decision (< 3 hours), Completion of any in-patient consultation or complex investigations (< 2 hours), discharge processes (1 hour). Prolonged (> 6 hours) diagnostic work-up, observation or treatment should occur as an in-patient. No patient should stay in the ED for more than 6 hours.
- A 'champion' on the floor in the ED who directly monitors and controls patient flows.
- Specialty inpatient teams ensure systems are in place to respond within 2 hours to requests for acceptance for care.
- A breach monitoring system is in place that identifies and measures timelines of every patient journey.
- An Emergency Physician 'decision to admit and transfer care policy' is in place to support the timely, safe and appropriate transfer of patients to definitive care.

Why use a 3-2-1?

Patient flow is an essential component of the ideal patient journey, particularly for complex high acuity patients who require timely access to initial care and work up. The processes of care that occur within the ED setting (some of which are out of the control of the ED) are often subject to delays that fragment a patient journey and may not add value to patient care.

In order to improve the flow of patients through the ED it is essential that the barriers to patient flow and decision making are identified and resolved and that key time points of the patient journey are defined, time limited and proactively managed.

The 3-2-1 process breaks down a patient's journey through the ED into manageable 'chunks' of time. It works by identifying measurable time points for each part of the journey and uses pre-agreed protocols and policies to expedite admission or discharge.

The underlying principle governing 3-2-1 is that patients should only stay in the ED for the minimum amount of time required to safely assess, stabilise and transfer care to the inpatient environment or discharge home safely.

How it works

3-2-1 assigns the following time targets:

- 3 hours for the ED to examine a presenting patient, run diagnostic tests, commence initial treatment and determine whether the patient is a likely admission
- 2 hours for specialty medical teams to consult with a view to admission
- 1 hour for inpatient wards to be ready to take over the care of the admitted patient and move the patient.

Time targets are identified after arrival of each patient to the ED. These are monitored and issues are identified and resolved in a timely way so that patient transfers out of ED can occur before decision-making and exit times are breached.

Resuscitation

Patients requiring resuscitation are a subset of 3-2-1 care. Sufficient staffing and skill mix should be available to provide care for the expected caseload of such cases without significantly impacting on the flow of the other patients through the Emergency Department.

ED responsibilities (3)

To decrease the time taken to work-up patients for admission to 3 hours, ED staff should:

- Expedite assessments, investigations and initial therapy
- Make timely decisions about the need for admission at a senior level
- Streamline the process for obtaining an appropriate ward bed
- Ensure communication between ED and specialty teams can occur accurately and in a timely manner (eg use IT systems or use a communications clerk).

Inpatient team responsibilities (2)

To ensure the review and acceptance for admission of patients from the ED within 2 hours inpatient teams should do the following.

- Ensure the availability of admitting staff to be able to respond within 2 hours
- Review the patient in the ED and accept responsibility for care within 2 hours
- If specialty team review is not possible within 2 hours, accept the ED decision to admit.

ED and inpatient team responsibilities (1)

To ensure the patient is transferred to the ward after a bed has been identified requires cooperation between the following parties:

- ED Supervising Senior Clinician and ED Clinical NUM/Nursing Team Leader
- ED and Inpatient Clerical Staff
- Inpatient Clinician and ward NUMs
- Bed Manager
- Portering Services.

Before a patient leaves the ED there is a final check by the ED Clinical NUM or Nursing Team Leader and a senior ED medical staff member to make sure that the patient is safe for transfer, there is adequate documentation and there is an adequate immediate and ongoing management plan.

In order for it to work well it requires some simple enhancements of current ED and hospital procedures:

- Raising awareness of where a patient is in their journey: Every person involved with a patient's journey has a role in 3-2-1. For example enhancing the ED whiteboard to provide a focus for decision making priorities, utilising alert systems or introducing a 3-2-1 Admission form can help to achieve this.
- Actively work toward 3-2-1 time goals: In the ED all team members should be encouraged to prioritise their work in order to meet their time portion of the 3-2-1 processes. The ED NUM/ Nursing Team Leader and ED Staff Specialist (or Registrar in charge) will drive this process.
- Regular (~2-hourly) rounds by the Patient Flow Manager/Bed Manager.
- Inpatient teams response: Rapid responses to ED requests for consultation, improved discharge planning and early discharges will enhance the ability to meet patient flow time targets.
- Diagnostic Services: Improved access to and prioritisation of diagnostic tests to define initial care and disposition will contribute to the effectiveness of the 3-2-1 procedure. Reducing the overall number of tests ordered from the ED may assist with this, eg the Sensible Test Ordering Program in place in the Prince of Wales Emergency Department.
- There is early review by senior medical staff capable of:
 - defining the clinical problem
 - ordering focused investigations
 - initiating timely and appropriate clinical interventions
 - predicting likely disposition (admit/discharge)
- Access to Short Stay EMU beds.

Keys to success:

The key to the success of 3-2-1 is dependent on a number of things:

- The engagement of key stakeholders and specialty teams to gain acceptance of the 3-2-1 process.
- Process of 3-2-1 should be clear and the business rules consistently applied. Clear admission policies for patients with undifferentiated illness requiring in-patient care, as well as for patients with diagnoses that are not clearly the responsibility of a single subspecialty group.
- Early intervention, decision making and leadership by senior medical staff.
- The availability of both internal ED and non-ED champions.
- Recognition of the role of ED specialist and the ED decision to admit (as a fall back position where timely specialty team review is delayed).
- Proactive management of a patient's journey and ownership of the process by both the ED and inpatient Nursing and Medical Team coordinators.
- Early identification of timelines.
- Access to inpatient and short stay beds.
- The timely identification and management of common breaches.
- Timely access to Allied Health Services.
- Timely access to Pharmacy support.
- Rapid access to existing medical information and risk alerts.

Short Stay Units

(complex and high acute patients)

Key elements from the ideal patient journey

Frank's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Standardised work up for risk assessment presentations (eg headache, chest pain, fever).
- Access to Short Stay Emergency Medical Unit (EMU) Admission (<24 hours).
- Short Stay Medical and Surgical Assessment Units.
- Transfer to ward within 8 hours of presentation to hospital.

Key principles

- Provide facilities to assess and observe patients in an area outside the ED to help ensure the maximum length of stay in ED is 6 hours.
- Quarantined beds for short stay purposes (Cooke, Higgins & Kidd, 2003).
- A 'fast track' philosophy. Improve patient flow by providing timely assessments and treatment in the shortest time that is clinically appropriate (Royal Melbourne Hospital p.30, 2004: American College of Emergency Physicians, 1994).
- Provide the ED with improved patient flow to increase its capacity, reduce patient length of stay and assist in reducing long ambulance off load times.
- Priority access to diagnostic facilities (Royal Melbourne Hospital p.12, 2004: Cooke et al. 2003).
- Front-loaded resources for accurate assessment and appropriate management can significantly reduce the patient's length of stay as an inpatient.
- Provide patients with a more comfortable environment than the ED.
- Provide a safety net function against inappropriate discharge.

What are Short Stay Units?

Short Stay Units are described in the literature in many different ways.

Examples include:

- Older Persons Evaluation Review & Assessment (OPERA)
- Emergency Medical Units (EMU)
- Short Stay Observation (SSO) Units
- Clinical Decision Units (CDU)
- Medical Assessment and Planning Units (MAPU)
- Admission Units
- Chest Pain Units (CPU)
- Surgical Acute Review & Assessment (SARA)
- 23 hour wards.

These are examples of the range of units that are used to facilitate a short stay admission both nationally and internationally.

For the purpose of clarity the generic term Short Stay Unit (SSU) will be used in this document.

SSUs have three main functions:

1. Observation.
2. Specialist assessment and diagnosis.
3. Short-term high-level management.

The governance of these units varies and is dependent on the core business function of each unit. Whilst there is a difference in name and ownership, key elements and management principles are consistent across all types of Short Stay Units.

Why use them?

Short Stay Units (SSU) have been developed to provide a short period of assessment, course of therapy or observations for a group of patients who no longer require active ED care. In the past these patients would have just remained in the ED.

These units are designed to provide short-term (<24 hours) assessment and/or therapy for select conditions in order to streamline the episode of care. SSU front load resources to provide an intensive period of evaluation, treatment and supervision. The emphasis is on enhancing patient flow through ED by allowing for early transfer out and improving ED bed access (Cooke: Higgins & Kidd 2003: Hassan 2003: American College of Emergency Physicians 1994).

What do they look like?

While there are differing forms of Short Stay Units (SSU), each with a different core purpose, they all are similar in their staffing and organisational requirements.

The effective functioning of SSUs is dependent upon proactive management; appropriate, dedicated nursing and medical staffing; clearly defined clinical governance; and a multidisciplinary approach to patient care. It is also dependent on a clear set of policies in terms of admission and care, and a culture of frequent assessment and short-term therapy (Royal Melbourne Hospital p45. 2004: Hassan 2003: Cooke et al 2003).

In general, medical responsibility for patients managed in SSUs lies with the most appropriate clinical specialty. SSUs should have clearly defined policies and procedures for management of clinical conditions within specific time limits. Hassan (2003) notes 'evidence suggests that the ideal ward should be time limited (<24 hours) and be staffed by senior personnel. Strong management and policing of operational policies is vital. In particular, procedures for transfer out after 24 hours must be adhered to.'

The criteria for admission to an SSU will vary between institutions but should be consistent with the following principles.

- There should be a focused goal for the period of observation.
- SSUs should target patients with a range of low to moderate risk symptom complexes that with optimal diagnostic support could be discharged within a 6–24 hour period.
- SSUs can have a significant impact in minimising clinical risk for certain occult life-threatening conditions using clear diagnostic care pathways eg Low to moderate risk chest pain. (Hassan 2003: American College of Emergency Physicians 1994).

The size of each SSU is different and defined depending on local practices and clinical management strategies/pathways. Typically the bed base for SSUs in their various forms ranges from 8–24 beds.

What types of conditions are managed in SSUs?

There are ranges of conditions that are managed within SSUs including those that:

- are undiagnosed and are undergoing lengthy evaluation
- are likely to respond to a brief course of therapy, which then can be modified so that treatment can be continued at home
- are of uncertain severity or seriousness, which are expected to rapidly evolve and fully declare themselves
- need prolonged observation that should resolve within 12 to 24 hours.

SSUs have also been shown to be of use for the elderly population. Westmead Hospital has recently implemented a successful model called OPERA for the management of aged patients through the ED.

(See CD-Rom for list of conditions managed in SSUs)

Advantages

- As well as being advantageous to patients and their carers, a SSU model of care is complementary to ED aims and objectives and allows the ED to function more efficiently by:
 - increasing ED turnover
 - reducing ED length of stay
 - facilitating ambulance off load.
- The establishment of SSU increased the overall hospital bed capacity and results in saving hospital bed days.
- Reduced length of stay of general medical patients, and improved patient flow through the hospital.
- The combined impact of reduced length of stay and early allied health intervention in the MAPU and OPERA models can result in reduced levels of deconditioning in elderly patients whilst they are in hospital.
- Allow for focused allied health assessment and intervention.

Getting an SSU going

Firstly identify the type of SSU that is required. A detailed analysis of the type of patient demand is required to understand what the core business elements of the unit need to be. For example, in a hospital where condition groups such as chest pains are historically managed in the ED, the development of a Chest Pain Unit may provide the greatest utility, whilst in another aged care patients may be the area of greatest demand and the OPERA model will be the most appropriate.

Keys to success:

- An organisational structure that is based on strong leadership, dedicated staffing and effective patient flow.
- Responsibility and authority for the SSU should be carefully delineated. A Medical Director should be designated with ultimate responsibility and authority.
- Clearly defined admission criteria, well-planned policies and procedures. It is important that the policies and procedures of the unit reflect input from all disciplines of staff.
- A clear vision shared among all staff.
- Structural organisation must encompass a clear strategy, operational policies, and specified critical pathways of care for individual groups of patients (Hassan 2003: Royal Melbourne Hospital 2004).
- Regular key performance indicator and utilisation review. Regular reviews of the types of patient presentations ensure that the conditions managed within the unit are appropriate to patient.

What do you need to get them to work?

Patient selection criteria

- Develop admission and discharge criteria that are unambiguous, succinct and reproducible. They must be able to be consistently applied and understood by all staff (Hassan 2003).
- Criteria will vary depending on the type of unit.
- Identify the condition groups that may be admitted to the unit. Mandate that patients require observation or treatment for less than 24 hours duration (Hassan 2003: Cooke et al 2003).
- Criteria need to be flexible and reflect the change in clinical practice across varying conditions eg changes in the management of low intermediate risk chest pain have resulted in full admission avoidance (American College of Emergency Physicians 1994: Royal Melbourne Hospital).

Dedicated physical space

- Quarantined beds for short stay patients only. These should be in a distinct area to maintain the focus on intensive assessment, planning and intervention.

Designated staff

- Ensure staff have an understanding of the organisational objectives for short stay and can drive the flow of patient through the unit.
 - Clinical governance for the unit should lie with the most appropriate clinical specialty.
- Create a staffing profile that includes:
- a senior nurse who has first line management responsibility for the running of the unit
 - nursing staff with well-developed clinical skills as appropriate (eg advanced life support, cannulation, venipuncture, ECG interpretation)
 - medical staff who have the ability to determine clinical care requirements, and make effective and safe disposition decisions
 - access to Allied Health staff including Social Worker, Occupational Therapist and Physiotherapist
 - dedicated support staff (clerical, cleaner, portering)
 - position descriptions for all staff working in the SSU.

	What do you need to get them to work?
Scope of, and rules for, treatment	<ul style="list-style-type: none"> • Foster a culture with a focus on multidisciplinary assessment, short term proactive planning and intervention. • Develop good practice policies, procedures and evidence based clinical pathways for management of certain medical problems within specific time limits (American College of Emergency Physicians 1994: Cooke et al 2003). • Apply a fast track philosophy to ensure a focus on rapid and frequent multidisciplinary assessment and short-term therapy and observation (Royal Melbourne Hospital p.17 2004). • Strong management and policing of operational policies.
Operational policies and clinical protocols	<ul style="list-style-type: none"> • Ensure defined management responsibility and ownership that lies with the clinical specialty responsible for the unit ie ED, Geriatrics, General Medicine and Cardiology. Area and facility executive support is vital. • The structural organisation of units must encompass a clear strategy, operational policies, and specified critical pathways of care for individual groups of patients (Hassan 2003). • Proactive management and organisation with senior staff involvement (Hassan 2003: Cooke et al 2003). • Operational models of SSUs vary, with the most effective models pulling patients from the ED. Develop mechanisms that flag those requiring or having the potential to require a short stay admission early. This information should be fed to the SSU in a timely way. • Use clinical practice guidelines that identify: <ul style="list-style-type: none"> – detailed diagnostic criteria – admission and exclusion criteria – baseline and subsequent investigations – interventions including prescribing guidelines – observations – referrals and discharge criteria. • Define clinical review mechanisms with clear timelines. • To maintain effective flow, keep unit occupancy rates below 90 per cent.

What do you need to get them to work?

Breach management

- Develop a breach management process to monitor timelines of care and identify breaches.
- Consider:
 - early identification of patients who are likely to breach timelines of care
 - lines of responsibility for transfer of patients to an inpatient bed
 - review mechanisms to evaluate common causes of breaches.

Access to Diagnostic Services

- Ensure engagement of and priority access to diagnostic services 24 hours a day 7 days a week (Royal Melbourne Hospital p.49 2004).
- These services may include:
 - Radiology
 - Pathology
 - Endoscopy
 - Nuclear medicine
 - Cardiology
 - Exercise stress testing
 - Neurophysiology.
- Involve diagnostic staff in the development of process maps for short stay patients through their service. Agree turn around times for both testing and result reporting.
- Consider pre-booked slots in relevant diagnostic services based on historical throughput of the ED.

Equipment needs

- Equipment needs will vary. Consider specialised equipment that is not common to general inpatient areas including:
- cardiac monitoring
 - stress testing equipment
 - OT and physiotherapy equipment.

Where are they working?

The most common form of SSU functioning currently in NSW is an Emergency Medical Unit (EMU). EMUs have been set up in a number of hospitals in metropolitan Sydney and in Gosford, John Hunter (Newcastle), Dubbo Base and Tweed Hospitals.

Metropolitan hospitals include:

- Prince of Wales
- St George
- Liverpool
- Royal North Shore
- Manly
- Nepean
- Hornsby
- St Vincent's
- Campbelltown
- Blacktown

Westmead Hospital has both an OPERA and SARA Unit and Nepean has an OPERA. OPERA units focus on fast tracking multi disciplinary assessment and evaluation of patients over the age of 70, ensuring that their journey through the ED to definitive care is managed efficiently.

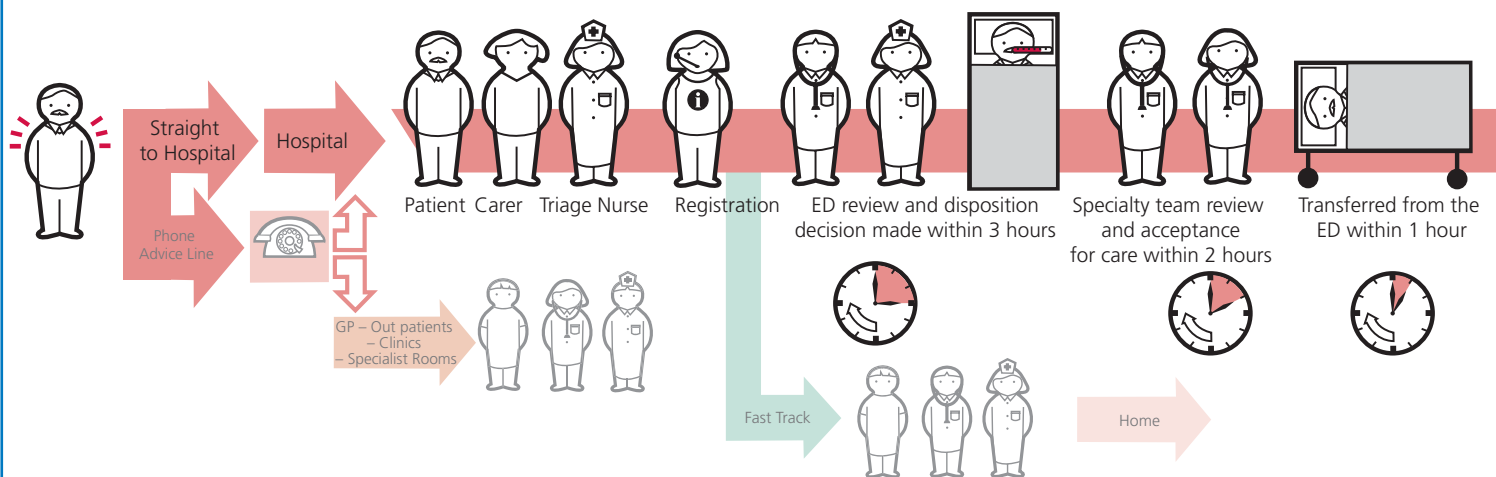
Frank's new story

Frank, a 67-year-old man who is usually fit and well, presented at 10.30 pm with a 20-minute history of stabbing chest pain and mild shortness of breath. When he arrived in the Emergency Department (ED) he was assessed at Triage, given a Triage Category 2, immediately transferred to a bed, given oxygen, placed on a cardiac monitor and had an electrocardiogram. Even though his symptoms settled 5 minutes after arrival to the department, Frank was seen and assessed by a senior clinician within 10 minutes of arrival and a number of blood tests and a chest x-ray were undertaken.

During the examination it was found that the pain was not typical of pain caused by heart disease and his initial blood tests were normal. But Frank had a number of risk factors for heart disease and so he was assessed as having an intermediate risk of developing a coronary artery syndrome that warranted further evaluation.

Within 4 hours of his arrival to hospital, a decision was made to admit Frank for further assessment of his pain. He met the criteria for admission to the short stay Chest Pain Unit. He was monitored for a further 8 hours in a comfortable ward, was fed and rested. A subsequent blood test was taken by the nursing staff to look for a rise in cardiac markers. After 12 hours with no further episodes of pain and normal blood tests, the cardiac monitoring was ceased. Frank had an exercise stress test done straight away, which proved to be normal and he was discharged home within 14 hours of arrival at hospital.

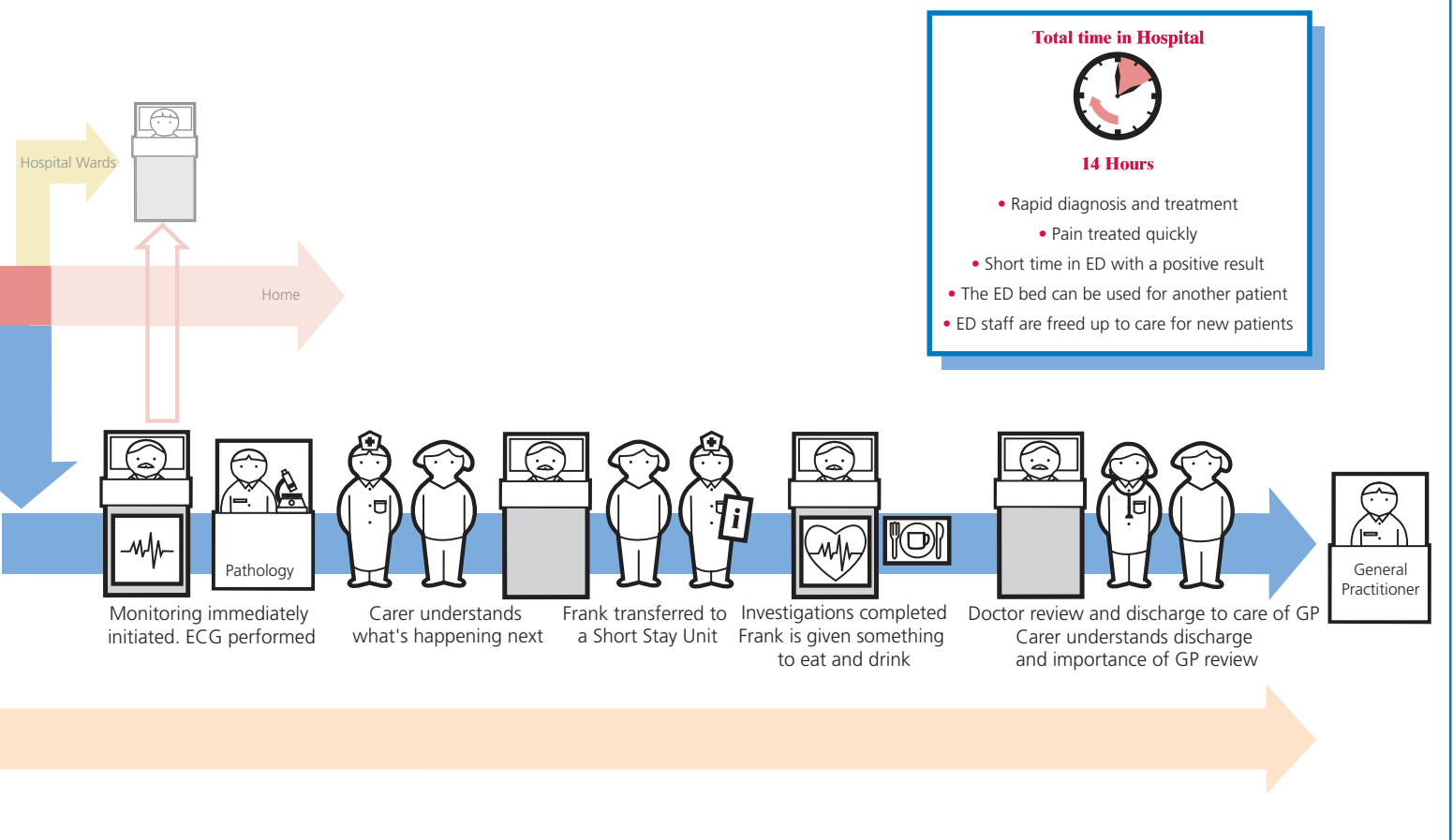
Frank's new journey:



Alternatives to ED Care include: CAPACS – Advice Lines – Direct referral to inpatient wards and/or Speciality Clinic

What's good about this story?

- Frank was seen quickly by a senior clinician and a decision was made about what needed to happen.
- Frank was admitted to a Short Stay Unit that looks after patients who need further observation and assessment for less than 24 hours.
- The ED bed Frank was in could now be used for another patient.
- Protocols enabled nurses to safely use their skills to assist in the management of patients with conditions like chest pain.
- The ED staff were confident that Frank was getting appropriate care in the Chest Pain Unit.
- The stress test that Frank needed to find out the cause of his pain was performed in the Short Stay Unit without delay.



Key elements from the ideal patient journey

A patient's journey could be improved using these key elements from the NSW Health Emergency Care Taskforce *Ideal Patient Journey*

- Integrated models of care (eg mental health, aged care, chronic and complex care)
 - focused ED assessment and management of acute health problems
 - **concurrent** assessment by appropriate service
 - further assessment in dedicated unit or at least by dedicated staff
 - acute exacerbation of chronic and complex disease
 - management plans of care that integrate care with ED and specialty unit.

Many patients who attend Emergency Departments require immediate assessment and stabilisation of an acute medical condition, but have an underlying condition that requires ongoing treatment. These patients will benefit greatly from early involvement of the specialty team that can treat the underlying condition.

Examples include patients with an injury who need ED treatment, but have an underlying mental illness, or an older person who has an injury from a fall, but has several conditions such as dementia, chronic obstructive pulmonary disease (COPD) and diabetes. Often, the Emergency Department is not the most appropriate place to treat these ongoing conditions, so a short stay is preferable.

Examples of Integrated Care Models include:

- Psychiatric Emergency Care Centres (PECC)
- Mental Health Liaison Nurses
- Aged Services Emergency Teams (ASET).

Psychiatric Emergency Care Centres (PECC)

Psychiatric Emergency Care Centres (PECC) aim to provide people presenting to the hospital Emergency Department (ED) that have an acute mental health illness or disorder and are at risk of (or with) behavioural disturbance and/or substance abuse co-morbidity with timely access to specialised mental health care. They also aim to provide:

- safety for consumers, service providers, and the public
- appropriate roles for the service providers (incl. Police and Ambulance).

PECC units are a new service model developed in response to changes in the service delivery environment of recent years, including:

- a policy context featuring the continuing move to mainstreaming, whereby mental health consumers have service entry and delivery at sites in common with other health consumers.
- the features of the increasing population burden of mental disorder, and the increasing acuity and co-morbidity of presentations to hospital.

PECC units represent a transition point in mental health services between community care and inpatient care (short stay or acute).

PECC units operate as an extension to the mental health Triage and assessment service offered by existing Consultation Liaison Psychiatry services, mental health CNC ED services and liaison mental health nurse practitioners. They extend service by offering:

- permanent presence in the ED
- full clinical assessment at the point of intake, and active discharge planning from the outset
- increased capacity to manage behavioural disturbance in ED
- bed capacity for overnight and short (<48hrs) stay.

Mental Health Liaison Nurses

About 60 mental health clinical nurse consultants (CNC) and mental health nurse practitioners are now operating in rural and metropolitan hospital Emergency Departments (ED). These nurses provide consult liaison, education, and direct clinical care (Triage, assessment, treatment). The balance of functions varies between hospital sites. In larger hospitals they may be part of a broader Consult Liaison Service. In most sites this service operates in business hours, 5 days a week.

Aged Care Services Emergency Teams (ASET):

ASET have been established in 36 NSW EDs in order to improve the care and management of older people presenting to the emergency department. ASETs may comprise of:

- Geriatricians
- Clinical Nurse Consultants
- Allied health professionals (mix dependent on local demands and workforce availability)

ASETs work with ED senior clinicians to provide specialised care, assessment and treatment to older people presenting to emergency departments. The aim of ASET is not only to improve the health outcomes of older patients but also to minimise the requirement to remain in hospital and to prevent re-admissions once patients are discharged.

Section 3. Alternatives to ED Care

Alternatives to ED Care

Other initiatives that can create a smoother patient journey through EDs include:

- Direct referrals
- CAPACs
- Advice lines.

Each of these is detailed on the following pages.

Key principles:

- Only patients who need the specific services of the Emergency Department (ED) should be referred to the ED.
- Other services should not use the ED as an alternate provider to cover periods of closure/leave/non-availability.
- Patients who need other speciality services should be referred directly to that service. The ED adds no value to that patient's journey, and in many cases simply adds unnecessary delays.
- There are specific groups of patients who would not require emergency care if they were better managed in the community setting by primary health carers such as general practitioners, APAC teams or chronic disease case managers. Programs to identify these patients and to better manage them will improve access to emergency care for those patients who really need it.

The ED is the main portal of entry in to hospital. However there are a number of presentation types that do not need ED care and would benefit from a direct referral to a speciality service. These referrals can be made from Triage to the speciality services, or ideally would be made direct from the referral source to the speciality service. Examples include:

- dental
- low acuity mental health
- sexual assault
- low risk pregnancy
- palliative care
- aged care assessment and rehabilitation
- specialist referral
- outpatients clinic referral.

Alternative pathways should exist for patients requiring non-emergency specialist review as well as patients suitable for direct ward admission from doctors' rooms. Solutions that have been designed to assist in this process include:

- a GP referral 'hotline' that takes all GP calls and can make direct admissions or bookings to rapid outpatient or community based services (refer Westmead Hospital and Dragon Direct at St George Hospital)
- defined referral processes and authority to refer for ED staff – for direct admission or to specialty outpatient clinics
- protocols for direct admission of specific patients arriving by ambulance
- protocols for inter-hospital transfers direct to ward
- area-wide patient flow protocols (eg Hunter New England Area Health Service HNEAHS)
- General Practice clinics.

Sydney West AHS, and in particular, Westmead Hospital, has developed strong systems to ensure urgent requests for admission to an acute inpatient bed are diverted away from the Emergency Department.

All inter-hospital transfers are admitted as direct ward admissions (DWA) by the admitting/accepting team. Urgent admission requests from consultants rooms, clinics, general practice, nursing homes and the community are managed through the GP Hotline as DWAs.

The Patient Flow Unit is the single point of contact for managing all requests for urgent admissions to acute inpatient beds, ensuring the maximum number of patients are admitted as DWAs rather than through the ED.

Key principles

- A completely separate stream for patients with low risk conditions that have clinical justification for management at home rather than in a hospital ward.
- Patients are treated by dedicated community based staff.
- Discharge from emergency to home can be achieved in two to three hours.
- Provision of comprehensive home based acute care as an alternative to hospital care.
- Provision of 24 hour/7 days per week nursing and medical on-call cover to enable out-of-hours emergency response.

Community Acute/Post Acute Care is the term used in NSW that encompasses a range of programs that have been known as Post Acute Care (PAC), Hospital in the Home (HITH), Ambulatory Care in the Community (ACC) or Acute Care at Home (ACH).

Why use CAPACs?

There are a number of conditions that have clinical justification for management at home as a direct substitution for a hospital ward. Conditions include:

- Cellulitis
- Pneumonia
- Chronic Obstructive Pulmonary Disease
- Bronchitis and Asthma
- Deep Vein Thrombosis
- Urinary Tract Infections
- Red blood cell disorders and transfusions
- Acute non-surgical pain
- Seizure, headache
- Gastroenteritis.

These diagnostic groups each comprise more than 4,000 admissions per year across NSW. The conditions are clinically able to be managed outside the hospital setting with as good or better clinical outcomes at a reduced cost (Wilson, Shorten and Marks 2005: Kasap 2002). CAPAC services can also be used to expedite discharge from short stay units.

What are CAPAC Services?

There are three broad models of care that currently operate in NSW.

Model	Examples can be found
Hospital outreach model with dedicated team of doctors, nurses and allied health staff where patients are admitted, enabling use of hospital indicators, data systems and records.	Prince of Wales and Campbelltown hospitals.
Hospital in-reach model where nurses and allied health staff work with General Practitioners and may or may not interface with EDs.	Hunter and Southern Highlands.
Hybrid model comprising elements of both.	Northern Sydney Central Coast AHS and Westmead.

The most effective model of care for a particular organisation will depend on the context, environment and nature of the organisation.

Patient selection

There are a number of conditions that can be managed by CAPAC services (as identified above).

However the selection of patients is dependant on their functional status ie that they are independent of their activities of daily living, their access to a telephone, meals and a toilet, and that they are cognitively able to comply with treatment.

Process of care

- Initial identification of patient in the Emergency Department inpatient area by CAPAC case negotiator or referral.
- Senior Medical Staff consulted regarding appropriateness of the patient for CAPAC. Medical responsibility determined.
- Development of care plan with patient/family, hospital staff, GP, and community services.
- Short-term care and discharge undertaken in collaboration with the relevant medical officer/services.
- Discharge summaries initiated.

Keys to success:

- An organisational structure that is based on sound clinical leadership, dedicated staffing and optimal patient volume.
- Single point of contact for referral and intake (and hospital liaison position).
- Capacity to admit to CAPAC within 3 hours of referral.
- Use of Commonwealth guidelines for:
 - Informed consent of patients receiving outreach services.
 - Informed consent of carer participating in the outreach service.
 - Patient selection into the outreach service.
 - Care planning for outreach service.
 - Discharge planning procedures.
 - Effective and clear communication.
 - Responsibilities of the general practitioner and the hospital.
 - Staff competency including skill level and continuing education.
 - Staff safety.
 - Patient and carer safety.

What do you need to get them to work?

- Multidisciplinary staffing mix with specific expertise in respiratory care, community care, and intensive care or emergency care.
- An ongoing analysis of the types of patient demand to understand the peak capacity potential of the CAPAC service to the hospital facility.
- Access to medical records department support.

Where are they working?

- Prince of Wales PAC Service
- Western Sydney PAC Service
- North Sydney Central Coast APAC Service
- St George Quick Response Service
- Macarthur Acute Ambulatory Care Service (MACS).

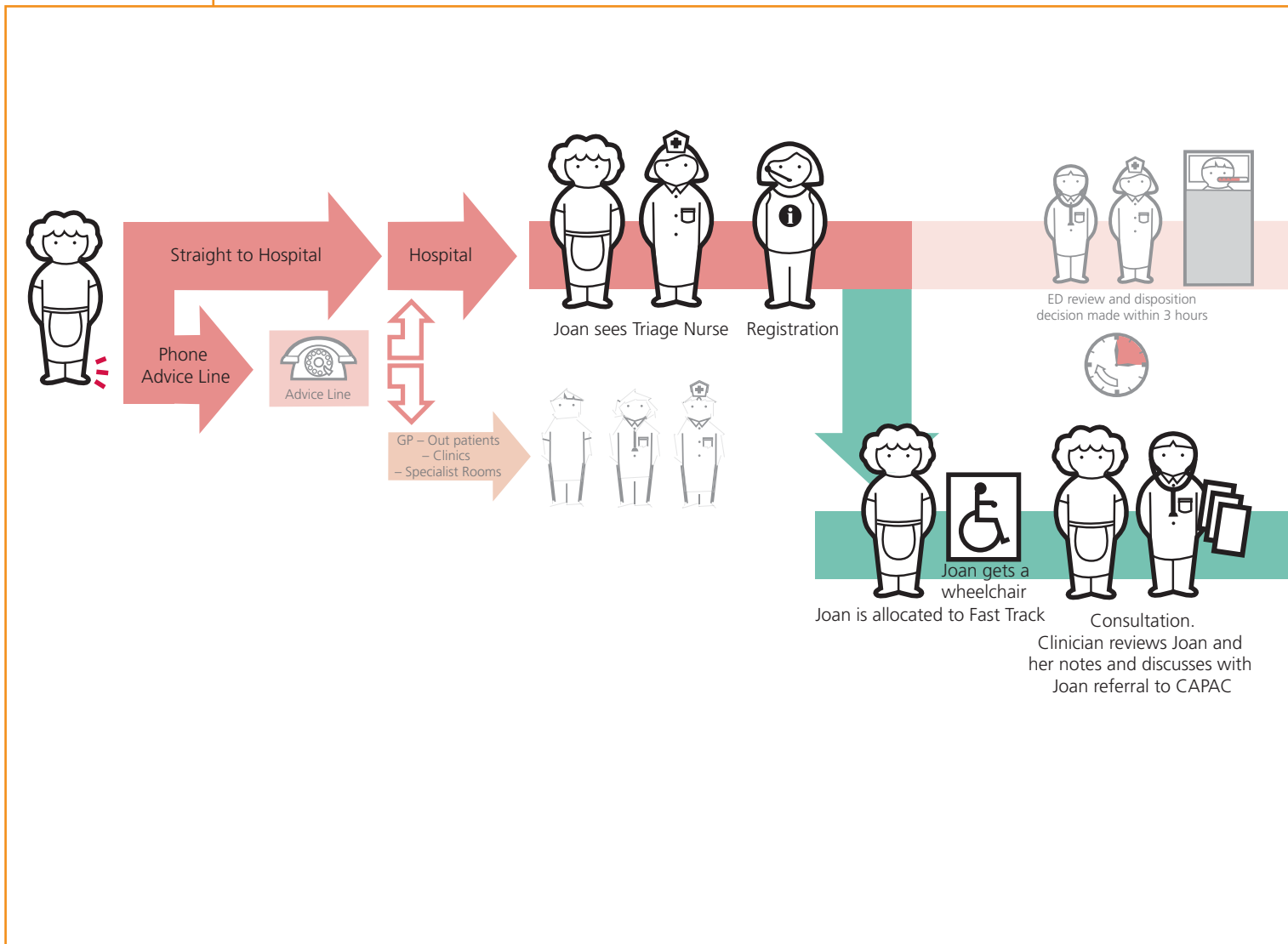
Joan's story
(she is treated by the CAPAC Service)

Joan, a 70-year-old woman presented to the Emergency Department with an inflamed left leg caused by cellulitis. This was her fifth presentation to the ED over 12 months. Each previous time she was admitted to the ward and received intravenous antibiotics for the cellulitis. She had spent 28 days in hospital over the last year.

On this occasion Joan was referred to the CAPAC liaison nurse, assessed and accepted for CAPAC services. Joan returned home after two hours and her treatment was provided at home over the next five days. The team arranged for clinical management and follow up with the specialist and then her GP.

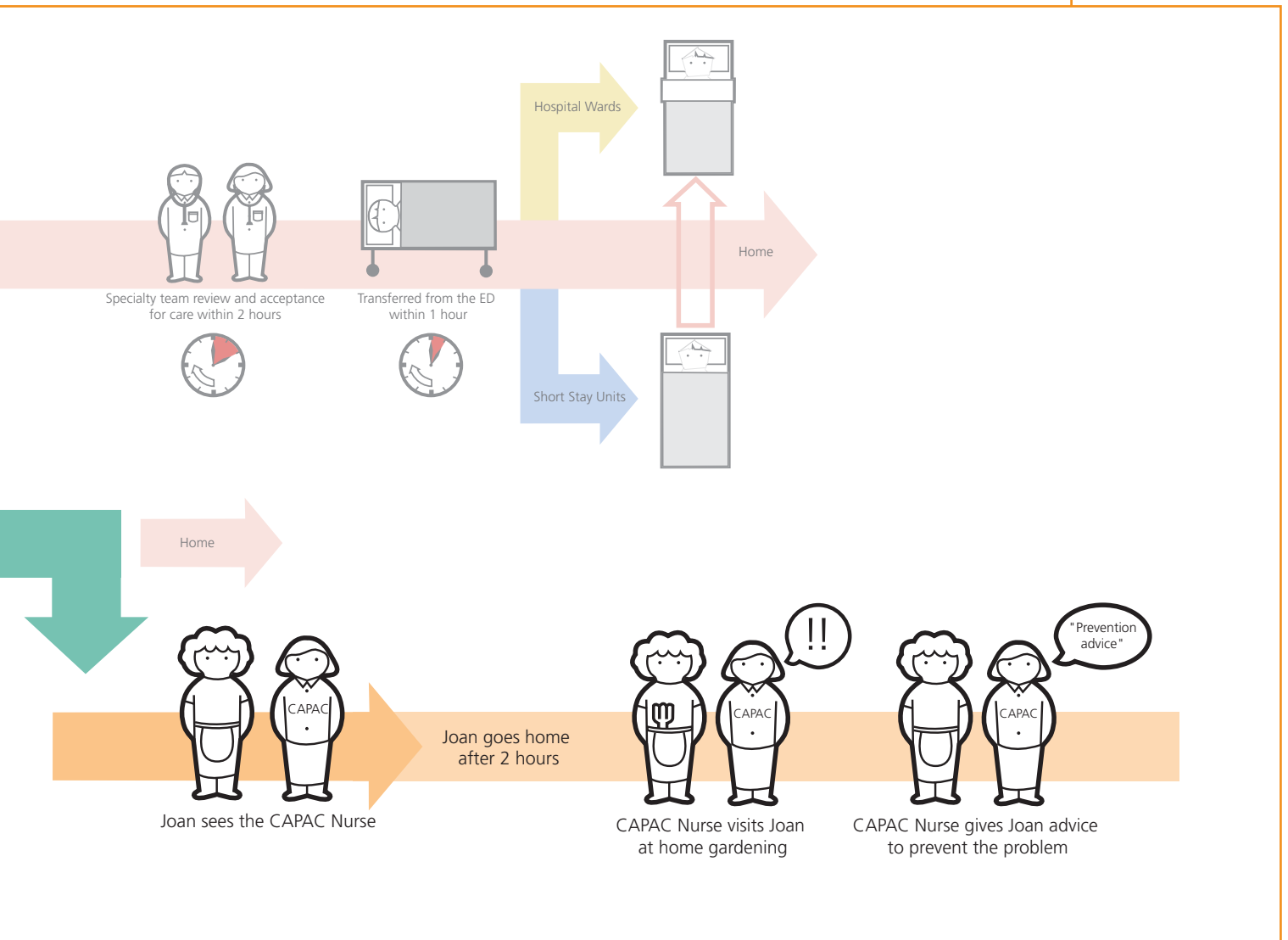
When the clinical nurse specialist visited Joan at her home, she talked with Joan about the cause of her cellulitis – a bacteria occurring frequently in potting mix. The nurse recommended that she tuck her trousers into her socks while gardening to prevent recurrence of the cellulitis. Joan did not spend any days in hospital and has not had a recurrence of cellulitis.

Joan's journey:



What's good about this story?

- Joan was seen quickly by a doctor and the CAPAC nurse and a decision was made about what needed to happen.
- Joan did not need to stay in hospital for her treatment at all.
- The Emergency Department bed and the ward bed were both freed up for other patients.
- Evidence based treatment protocols used by CAPAC services provide good outcomes for patients.
- Understanding how to prevent cellulitis recurring was a valuable part of Joan's treatment. It was easier for the service and Joan to work out a solution in her own home.



Advice lines

Telephone advice lines provide a service by which people can speak directly to a Registered Nurse and receive information and advice. Advice is provided on the right health service required, on the level of urgency, and what people should do until they receive face-to-face medical attention.

The aims of advice lines are to:

- make health services more accessible
- facilitate service delivery closer to where people live
- provide a confidential, reliable and consistent source of professional advice on healthcare 24 hours a day so that people can manage many of their problems at home or know where to turn to for appropriate care
- improve quality, increase cost-effectiveness and reduce unnecessary demand on other health services by providing more appropriate response to the needs of the public
- increase participation by health professionals in the community. (NHS Direct 2001)

Advice lines enable people to make decisions about their own or their family's health by providing expert advice and up to the minute information. The service can also act as a 24-hour signpost, directing people to the most appropriate level of care.

These services use predefined clinical management protocols to provide advice to callers.

There are a number of telephone advice services operating both nationally and internationally. Examples are operating in Western Australia (HealthDirect), the Northern Territory and the United Kingdom (NHS Direct). The Poison Information Centre is another example.

Appendix 1: Key performance indicators

The aims of the new models for ED care include to provide faster access to care, ensure early assessment, fast tracking and initiation of clinical care and reducing the total time spent in an ED. In order to ensure that the models of care introduced are improving the patient journey, it is essential to monitor the level of performance. There are a number of key performance indicators that should be measured.

The existing indicators used to measure ED and hospital performance under the Sustainable Access Program are:

1. Emergency Department	Time to commence treatment
Triage Category 1	100% within 2 minutes
Triage Category 2	80% within 10 minutes
Triage Category 3	75% within 30 minutes
Triage Category 4	70% within 60 minutes
Triage Category 5	70% within 120 minutes
Ambulance Off Stretcher Times	90% of ambulances off-loaded within 30 mins
2. Hospital Access Block	80% of patients transferred to an inpatient bed within 8 hours of commencement of active treatment in the ED

The Emergency Care Taskforce has also identified a number of internal ED indicators to support *the Ideal Emergency Department Patient Journey*. These suggested key performance indicators may be used locally to assess the effectiveness of the implementation of new models of care:

- Percentage of patients who 'Did Not Wait' for care – which should be less than 5 per cent of attendances.
- Time to placement on an acute care bed (for patients requiring acute beds only). This incorporates:
 - Ambulance Off stretcher time.
 - Time to placement in Acute Care for Non-Ambulance arrivals requiring non-ambulatory assessment and care.
 - This should be within triage benchmark times for Triage categories 1 and 2 and within 30 minutes (the ambulance benchmark time) for triage categories 3, 4 and 5.
- Disposition Decision time or time to Decision to Refer to in-patient care:
 - This represents the 3 hours of the 3-2-1 process of care. It is the ED component of the Access Block target. Measurement of this may be limited by the EDIS system in use, but departments should aim to monitor this as part of individual breach reports, as well as an overall measure of ED performance.
- Length of Stay for Non-admitted patients:
 - This is a heterogenous group that includes patients seen through the Ambulatory Fast Track Zone as well as the more complex patient's requiring more prolonged assessment and management (3-2-1) prior to discharge.
- Where EDIS data collection allows easy identification of these different streams, suggested KPIs would match the target for Total Time in ED.
 - Ambulatory Fast Track. 90 per cent less than 2 hours.
 - 3-2-1 care: 90 per cent less than 6 hours (< 8 hours for Triage 1 and 2).

- Where EDIS does not track streams, triage categories could be an alternate method of analysis with the following table providing suggested benchmarks. It is recognised that some departments will have a significant proportion of category 4 patients requiring complex workup (3-2-1 care). Some allowance for this would be required.

Total Time in ED for Non Admitted Patients	TOTAL time in hours (for 90% of patients)	
	Triage Category 1	< 8
	Triage Category 2	< 8
	Triage Category 3	< 6
	Triage Category 4	< 2
	Triage Category 5	< 2

- Unscheduled representation to ED within 48 hours

The Emergency Care Taskforce has also suggested broader Hospital KPIs that relate to ED patient flow. These are:

- Radiology and pathology performance – results/report available within 1 hour with written report next day. This will require specific tests and turnaround time to be defined. It is suggested that this occur in conjunction with rational test ordering such as ‘Sensible Test Ordering Project’.
- Time to in-patient review (the 2 hour component of 3-2-1).
- Time from ‘bed booked’ to ‘ward transfer’ (the 1 hour component of 3-2-1).
- Access Block overall and by speciality.
- Average length of stay in ED for admitted patients.
- Rate of failure to get a bed (direct discharge from ED after admission under an in-patient team).
- Unplanned readmission within 28 days.
- Outlier rates.

The ‘Jonah ED decision support tool’ is being used in a number of ED’s such as Royal North Shore, St George, St Vincent’s, and Wollongong. It is a tool that allows breaches of key performance times to be monitored, and allows reasons for delays to be recorded at the time.

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