

Discussion paper

Streaming care: Fast track services in hospital emergency departments

2008



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1. Introduction

This discussion paper, *Streaming care: Fast track services in Victorian hospital emergency departments*, has been prepared by the Department of Human Services (the department) in conjunction with the Emergency Access Reference Committee – Primary Care Subcommittee (see Appendix 1) and other key stakeholders.

According to process redesign principles, care processes that are sufficiently similar can be grouped into value streams. These value streams can be managed separately to increase the overall efficiency and reliability of the care processes. In Victoria, emergency department (ED) care processes have been segmented into a number of value streams, one of which is the fast track stream.

The fast track stream centres on ED care processes in a treatment pathway designated for the timely assessment, treatment and discharge of people seeking primary care type services for less serious illnesses and injuries. Services are provided by a multidisciplinary team in an identified area of the ED.

Fast track services have developed from a redesign of existing ED care processes. Redesign activities are part of a broader management strategy directed at improving processes, reducing costs and improving the quality and timely delivery of services. The variation in the service structure and development of fast track services therefore reflects the innovation and continuous improvement approach that underpins the services.

This paper follows a number of performance audits undertaken by the Victorian Auditor-General's Office (VAGO). In 2004¹ VAGO found public hospitals operated a variety of fast track services with similar aims but different structures and processes and recommended hospitals conduct local service evaluations to determine their impact on patient care. A follow-up report² released in 2007 identified further changes to service delivery models and a continuing need for local program evaluation.

Streaming care: Fast track services in Victorian hospital emergency departments documents various initiatives undertaken by health services establishing fast track services and the learning associated with these changes. It has been prepared to inform a forum on streaming and fast track services that will provide ED practitioners with the opportunity to consider the past and future service developments across the sector. The discussion paper outlines the:

- background and progressive development of fast track services
- process redesign principles
- Victoria's Redesigning Hospital Care Program
- key features of the state's fast track services
- evidence on the effectiveness of this model of care
- the initiatives undertaken by the health services operating fast track services and the associated learning points.

¹ Victorian Auditor-General's Office 2004, *Managing emergency demand in public hospitals*, Melbourne, pp. 67–70.

² Victorian Auditor-General's Office 2007, *Follow-up of selected performance audits tabled in 2003 and 2004*, Melbourne, pp. 45–46.

Streaming care: Fast track services in Victorian hospital emergency departments has been informed by a statewide survey³ of fast track services undertaken in 2006 and stakeholder consultations in 2007 with five hospitals representing the various service delivery models operating in Victoria.

The discussion paper aligns with the department's Redesigning Hospital Care Program, a four-year statewide initiative aimed at building health service capability to create, spread and sustain improvements in the delivery of patient care by applying process redesign methodologies.

The aim of the paper is to support health services to re-engage in the process redesign activities that underpin fast track services. To this end, it presents a series of topics and questions for discussion at the Streaming Care: Fast Track Services Forum that are designed to:

- facilitate an exchange of learning and information between health services on fast track initiatives
- identify enablers and new initiatives that may promote further innovation and streamlining of fast track services
- identify opportunities to align care processes across services and patient care pathways.

The Streaming Care: Fast Track Services Forum will also provide an opportunity to identify ED redesign projects that can form part of the Redesigning Hospital Care Program and capitalise on the *Better Skills, Best Care workforce redesign strategy*.

1.1 Background

In 2001, in response to unprecedented and sustained increases in demand for health care services, the government implemented the four-year *Hospital demand management strategy* (HDMS). The strategy had five key aspects:

- creating extra capacity through funding growth
- relieving pressure on acute hospital beds and EDs through diverting people to alternative options where clinically appropriate
- working with clinicians to achieve better patient management practices through negotiating a tailored response for each hospital
- improving working conditions to attract and retain nurses
- implementing a prevention strategy to reduce the demand pressures on hospitals.⁴

A number of services were funded under the HDMS to establish fast track services with a view to diverting people to alternative models of care and improving patient management practices. These early services included models such as medically assisted triage, rapid assessment teams and dedicated treatment clinics.

Around this time the National Health Service (NHS) Modernisation Agency in the United Kingdom introduced the lean management principles used in the manufacturing sector to address demand issues in hospital EDs. A system of care known as 'See and Treat'⁵ was introduced whereby patients with less acute problems were assessed and treated by a dedicated clinician as soon as they arrived at the ED.

³ Department of Human Services 2007, *Results of fast track survey January 2006 (unpublished)*.

⁴ Department of Human Services 2002, *Hospital admission Risk Program (HARP) Background Paper* Emergency Demand Coordination Group, Melbourne, p. 11.

⁵ National Health Service Modernisation Agency 2002, *See and Treat*, London.

In 2003 the Flinders Medical Centre in South Australia applied redesign principles to its ED processes and developed a method of streaming patient care.⁶ Patient flows were restructured and patients were streamed according to their predicted outcome.

In early 2004, the Victorian Patient Flow Collaborative (PFC) was established, aiming to:

- remove unnecessary waits and delays in delivering health services to Victorian patients
- build the skills needed for successful innovation within health services
- embed and mainstream service innovations and change.⁷

Seventeen metropolitan and six regional health services were funded to participate in the PFC and test various innovations including those designed to improve flows through EDs. The PFC was based on the 'breakthrough series methodology' and adopted a whole-system thinking, which encompassed the whole patient journey as the focus of investigation.

Melbourne, Northern and Goulburn Valley Health undertook innovations relating to the flow of low-acuity ED presentations. Melbourne Health adopted the Flinders Medical Centre model and streamed ED patients so different patient groups were managed on the basis of their predicted end location. Northern Health established a rapid assessment team and introduced a specialist nurse practitioner role responsible for assessing and managing an identified patient group. Goulburn Valley Health changed its care delivery model so staff could assess and treat triage category 4 and 5 patients while category 1, 2 and 3 patients waited for their next stage of care. These various fast track models were reviewed and modified by individual health services as part of the process.

Seven additional health services established fast track services during 2005 and 2006 after examining the various PFC projects, many of which involved streaming of patients. A number of the hospitals with fast track services reconfigured their models of care around this time. At present two regional hospitals and all the metropolitan hospitals except the Angliss provide a fast track service.

In 2005–06 the development of new fast track services was supported by the Victorian government providing additional funding over four years to implement new models of care trialled under the HDMS. The mainstreaming of new models of care and the development of ED fast track guidelines were key priorities identified in the Better faster emergency care⁸ policy released in 2006.

1.2 Process redesign

Process redesign is a management strategy directed at improving processes, reducing costs and improving the quality and timely delivery of services. All organisations are composed of a series of processes or sets of actions that are intended to create value for those who use them.

The core idea of process redesign involves determining the value of any given process by distinguishing the actions that add value from those that do not. By eliminating unnecessary steps or 'waste' ultimately every action can add value to the overall process.⁹

⁶ King DL, Ben-Tovim DI, Bassham J 2006, 'Redesigning emergency department patient flows: Application of lean thinking in health care', *Emergency Medicine Australasia* 18, pp. 391–397.

⁷ Department of Human Services 2006, *Patient flow collaborative Final report*, Melbourne, p. 6.

⁸ Department of Human Services 2006, *Better faster emergency care: Improving emergency care and access in Victoria's public hospitals*, Melbourne, p. 44.

⁹ Institute for Healthcare Improvement 2005, *Going lean in health Care*, Cambridge, p. 2.

There are eight types of waste:

- waiting
- queues
- errors such as medication errors and wrong procedures
- transportation such as moving patients or equipment
- motion such as searching for paper work or equipment
- over processing such as unnecessary tests and duplication
- overproduction such as referrals made too early
- not using skills and expertise of people doing the job. ¹⁰

Process redesign involves six key principles as follows.

Key principles of process redesign

- Specify the value desired by consumers.
- Map every action in a given process.
- Eliminate practices and actions that do not create value.
- Make the value-creating steps occur in a tight and integrated sequence so the process flows smoothly.
- Allow consumer demand to determine the flow.
- Pursue continuous improvement in quality and productivity. ¹¹

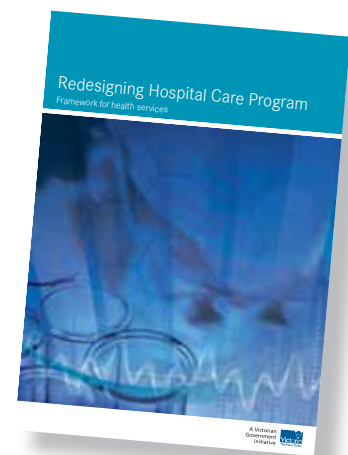
The Victorian health sector is currently serviced by the Redesigning Hospital Care Program. Details are presented in the following section.

1.2.1 Redesigning Hospital Care Program

The Redesigning Hospital Care Program ¹² was launched at the 4th Australasian Redesigning Health Care Summit in Melbourne in March 2008. It is a four-year statewide initiative aimed at building health service capability to create, spread and sustain improvements in the delivery of patient care through applying process redesign methodologies.

The objectives of the Redesigning Hospital Care Program will be achieved by:

- funding the establishment of redesign units in health services and specific redesign projects
- providing health services with necessary tools, techniques and support to plan, deliver and measure improvements in priority areas



¹⁰ Ben-Tovim D 2007, *Redesigning care: The Flinders journey into a lean future*.

Available at: <www.health.wa.gov.au/hrit/service_improvement/docs/Presentation_David_Ben-Touim.pdf>.

¹¹ Womack JP, Jones DT 1996, *Lean thinking: Banish waste and create wealth in your corporation*. Simon & Schuster, New York.

¹² Department of Human Services 2008, *Redesigning Hospital Care Program Preliminary program guideline*, Melbourne.

- developing collaborative relationships between health services to share ideas and innovation so that the benefits of redesign activities are realised at a system level. ¹³

In the lead up to the program launch three pilot projects were undertaken at Southern Health, Bayside Health (now called Alfred Health) and Western Health to test methods and quantify the benefits of hospital redesign projects. The pilot projects demonstrated that Victorian health services have the ability to:

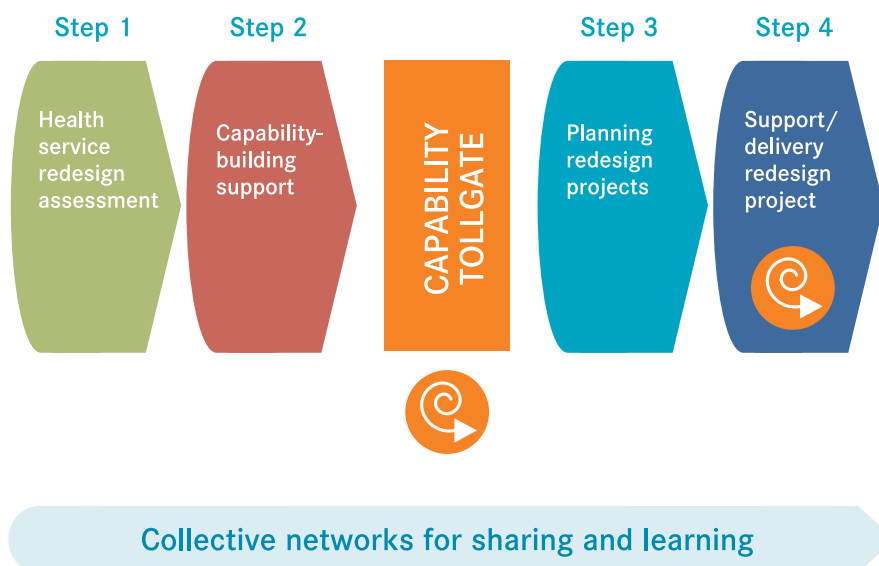
- adopt non-health-industry improvement methods and apply them successfully to a health service context
- rapidly acquire redesign skills
- work with external mentors to help ensure project quality and develop skills. ¹⁴

The Redesigning Hospital Care Program is being delivered in a staged approach ensuring health services have sufficient capability for sustainable redesign before engaging in redesign projects. The key steps for health services involved in the program are:

- self-assessment of current redesign capability
- capability building
- planning redesign projects
- delivery of redesign projects. ¹⁵

These four key steps are represented diagrammatically in Figure 1.

Figure 1: Key program steps for health services



¹³ Department of Human Services 2008, *Redesigning Hospital Care Program Framework for health services*, Melbourne, p. 3.

¹⁴ *Op. cit.* p. 8.

¹⁵ *Op. cit.* pp. 10–18.

The Redesigning Hospital Care Program will be underpinned by statewide redesign networking, sharing and learning. The three main areas where collaborative work is required are:

- knowledge management
- peer and expert support
- career development opportunities.¹⁶

Collective projects will be undertaken where a number of health services wish to apply process redesign processes to a particular area of common interest.¹⁷ Fast track services may represent such an area of interest.

1.3 Workforce redesign

Process redesign includes management strategies that ensure the skills and expertise of staff undertaking a job are fully utilised. In Victoria, the *Better Skills, Best Care strategy*¹⁸ seeks to encourage health services to explore new and redesigned work roles and provide support to pilot and roll out initiatives. The emphasis is on developing roles that will provide better outcomes for patients, promote greater work satisfaction for staff and contribute to more efficient and sustainable health services.

1.3.1 Better Skills, Best Care

Better Skills, Best Care is a workforce utilisation program that facilitates workforce reform and redesign projects, fosters a reform environment and formulates relationships among all key stakeholder groups interested in redesign opportunities including health and community service providers, education and training providers, consumers and professional groups. Workforce skill utilisation is improved through:

- working to maximum scope of practice
- expanding existing scopes of practice
- improving organisation systems and processes.

The Better Skills, Best Care workforce strategy aims to explore how:

- work might be reorganised to minimise duplication of effort and make best use of available staff
- new roles can be developed to meet current and evolving patient needs
- technology can be better employed to manage training and workforce requirements.

The Better Skills, Best Care strategy aims to integrate role design workforce initiatives with current and planned departmental service strategies. A number of projects have been funded to develop, test and implement roles and role configurations that better align skills to patient needs. The approach taken to workforce review and design involves:

- consulting with a service or work area to determine the scope of the service to be mapped
- mapping typical patient journeys through the defined service stream

¹⁶ *Op. cit.* pp. 11–12.

¹⁷ *Op. cit.* p. 12.

¹⁸ Department of Human Services 2007, *Better Skills, Best Care workforce redesign strategy*. Available at: <<http://www.health.vic.gov.au/workforce/skills.htm>>.

- identifying the tasks and competencies required along those journeys
- brainstorming ways to do things differently including opportunities to re-allocate and delegate tasks
- clustering skills and abilities most effectively into new or changed work roles and configurations
- documenting the changed roles, workforce configurations and skills and competencies required
- assessing the education and training needs of and delivering training for the changed roles
- trialling changes, embedding the role into the service and evaluating the impact of the role on patients, staff and the health service
- assessing changed roles for broader application across the sector. ¹⁹

The *Better Skills, Best Care strategy* provides information on workforce initiatives and supports the exchange of ideas on creative work role solutions such as those employed in fast track services.

1.4 Application of process redesign principles to fast track services

In Victoria, EDs are designed to deliver short episodes of time critical care and treat people who are experiencing a medical emergency. They provide a 24-hour, seven-day-a-week service and treat people on a walk-in basis. The following section outlines a broad example of how the various steps in process redesign can be applied to the general ED care processes for people seeking primary care type services for less serious illnesses and injuries.

Consumer values

A national patient survey undertaken by Booz Allen Hamilton in 2007 indicates that people presenting to an ED for minor illnesses and injuries are seeking and therefore value:

- timely treatment with waiting times and delays kept to a minimum
- high-quality services
- access to a range of services in single location. ²⁰

Mapping of processes

A series of actions are undertaken by ED staff when addressing the health care needs of people presenting to an ED with less serious illnesses and injuries. The broadly defined steps in patient care, the location in which they are undertaken and the associated care processes with which there is interaction is outlined in Table 1.

This diagram provides a generic overview of each step in the patient care process. Each step involves many individual tasks that need to be mapped in detail to identify tasks that do not add value to patient care processes. The pilot projects for the Redesigning Hospital Care Program showed non-value adding activities were estimated to comprise between 24 per cent and 28 per cent of total staff time in the processes examined. ²¹

¹⁹ *Op. cit.* pp. 1–2.

²⁰ Booz Allen Hamilton 2007, *Key drivers of demand in the emergency department in New South Wales, NSW Department of Health, Sydney*, pp. 54–58.

²¹ *Redesigning Hospital Care Program 2008*, p. 8.

Table 1: Generic process for patients presenting to an emergency department with less serious illness or injury

Step in patient care	Triage	Clinical work-up (nursing)	Clinical work-up (medical)	Investigations	Treatment	Discharge or admission
Location	Waiting room	Cubicle	Cubicle	Radiology	Cubicle/ treatment/ plaster room	Community or inpatient or sub-acute ward
Associated care processes				Radiology Pathology Care coordination Allied health HITH Pharmacy		Care coordination Pharmacy

Eliminating practices that do not create value

Following the process outlined in Table 1, a patient is triaged and returns to the waiting room for a certain period until they are transferred to a cubicle where the nursing and then medical work-up commences. As part of the medical clinical work-up process, the medical officer may initiate a pathology request and the patient will be required to wait in the cubicle until the results are processed by the pathology department and then wait for a medical officer to come to review the results.

By redesigning the care process to allow nurses to initiate pathology tests when a patient is first transferred to the cubicle, the results will be available at the commencement of the clinical medical work-up. The time patients spend waiting to see a medical officer for a second time is eliminated. This reduces the overall time a patient spends waiting in the ED and improves cubicle availability.

Creating flow according to consumer demand

By introducing nurse-initiated pathology requests during the nursing clinical work-up, a step in the care process that does not add value (waiting time) is eliminated and it produces a tighter sequence of steps that allows the process to flow more smoothly in accordance with consumer demands for shorter waiting times.

Continuous improvement

Patient waiting times may be further reduced by introducing nurse-initiated pathology requests at triage. Using a cyclic improvement process such as the Plan, Do, Check, Act (PDCA) cycle, the ED team will be able to identify the steps that need to be changed, how to make that change and then measure and evaluate its impact on the care process. A stable environment and a cyclical improvement process are required to support a continuous improvement approach.

The process redesign steps outlined above can be applied to various ED practices associated with a stream of patient care to enhance the overall efficiency and productivity of care.

2. Fast track services in Victoria

2.1 Introduction

In October 2006 a statewide survey²² was conducted to map the fast track services being provided by Victoria's hospital EDs. Selected results have been included in this discussion paper to provide an overview of the structure and operation of the state's fast track services.

In 2006, Bendigo and Geelong regional hospitals and all the metropolitan hospitals except Mercy Hospital for Women and the Angliss, Eye and Ear and the Royal Women's hospitals provided fast track services (see Appendix 2). While the Ballarat, Goulburn Valley and Latrobe Regional hospitals did not have a designated fast track system, they utilised a range of fast-track-related initiatives such as nurse-initiated analgesia, pathology and radiology ordering and limb injury management.

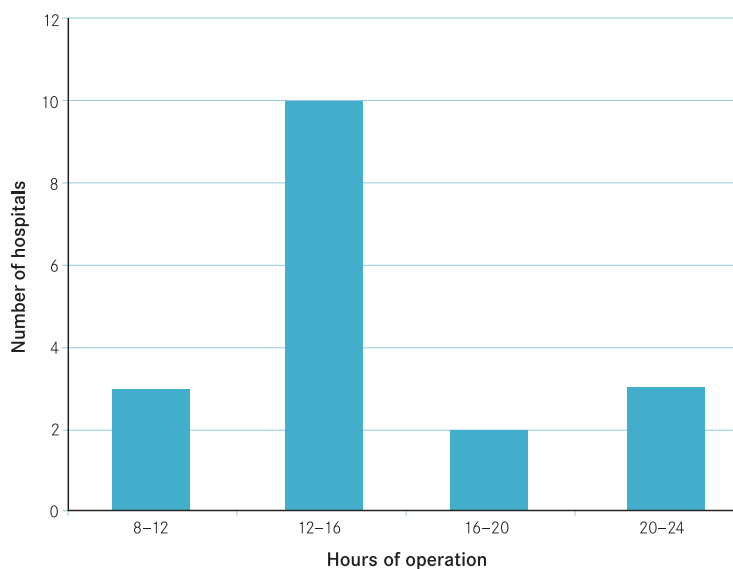
Victoria's fast track services commenced operation at various times between 2001 and 2006, with just under half established during 2005–06. Some services have been progressively developed and expanded over a number of years.

2.2 Hours of operation

In 2006, 15 hospitals had set hours of operation for their fast track services and three operated as required. Sixteen hospitals operated seven days a week, one weekdays only and another Friday, Saturday and Sunday only.

On average fast track services operated for 16 hours a day. As Figure 2 shows, just over half the hospitals operated fast track services for between 12 and 16 hours a day.

Figure 2: Number of hospitals, by hours of operation per day



²² Department of Human Services 2007, Results of fast-track survey January 2007 (unpublished).

Figure 3 outlines the percentage of the total daily ED operating hours that the fast track service was utilised in the 17 hospitals providing this information. Seven hospitals utilised their fast track services between 61 and 80 per cent of the 24-hour operating period. This is equivalent to two eight-hour shifts per day.

Figure 3: Percentage of the total daily ED operating hours utilised for fast track services, by number of hospitals

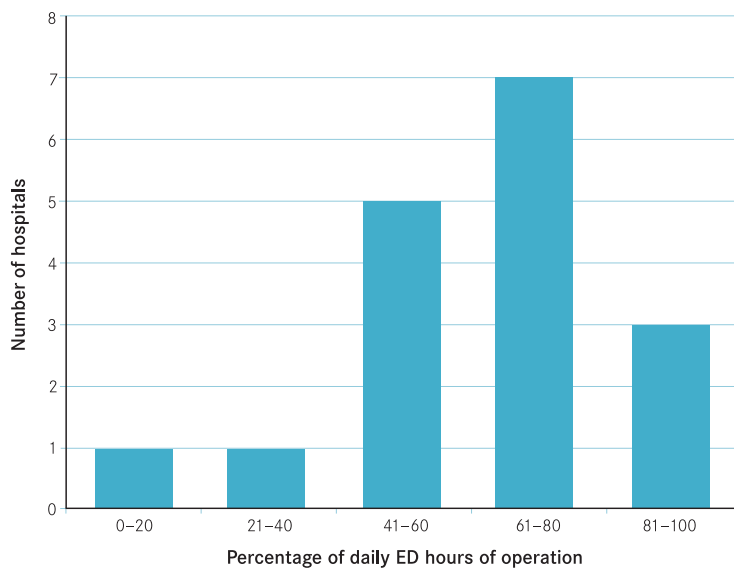
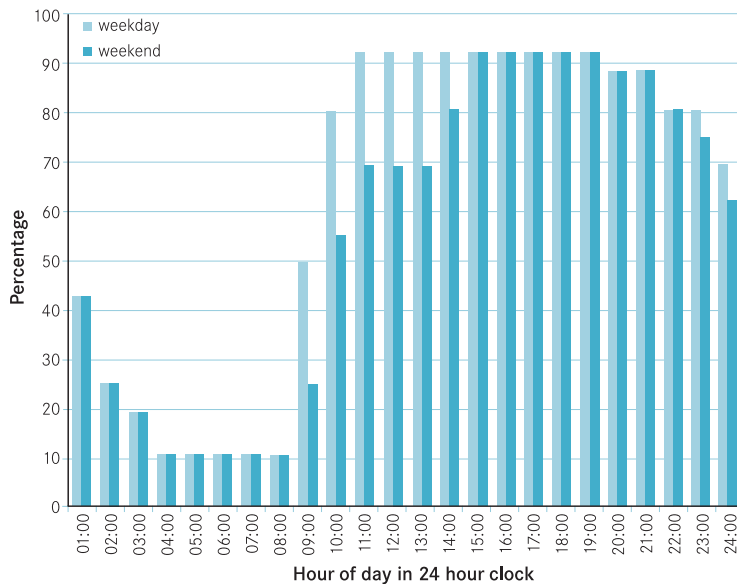


Figure 4 outlines the proportion of EDs operating each hour over a 24-hour period during weekdays and over the weekends.

Figure 4: Percentage of hospitals operating and PCT presentations, by hour of the day



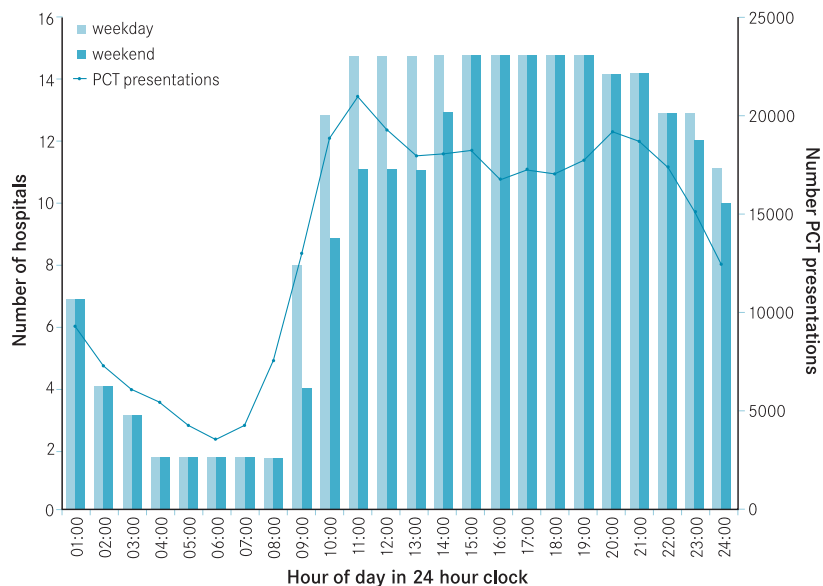
Most fast track services did not operate during the overnight shift period (from around midnight till morning), which accounted for about a third of ED operating time. Some 64.7 per cent of hospitals finished their fast track services between 10.00pm and 2.00am and 64.7 per cent had commenced services between 8.00am and 9.00am. This means 58.8 per cent of hospitals operated their fast track services during the morning and afternoon shifts.

Figure 5 outlines the proportion of EDs operating each hour over a 24-hour period and the proportion of PCT patients presenting to EDs each hour over a 24-hour period during 2006–07.

The data shows a correlation between the operating hours for fast track services and PCT patients presenting to the ED. There is a steep increase in the number of PCT presentations to hospital EDs between 7.00am and 11.00am. During week days, fast track operating hours closely match patient arrival times. This is not the case on the weekends where there is greater variation between operating hours and PCT patient presentations.

The steep decline in PCT presentations, which begins around 8.00pm, corresponds to a gradual reduction in fast track services operating after 7.00pm.

Figure 5: Number of hospitals operating and PCT presentations, by hour of the day



2.3 Physical amenities

The type of facilities used for fast track and the nature of the space are shown in Table 2. Overall there are 32 chairs and 63 cubicles available for fast track services in Victoria. On average, this represents 1.8 chairs and 3.5 cubicles per fast track service. A range of other facilities are also provided including trolleys, wheelchairs, corridor chairs, triage cubicles and a range of rooms such as procedure, plaster, consultation, waiting and eye rooms.

Table 2: Type and nature of fast track facilities

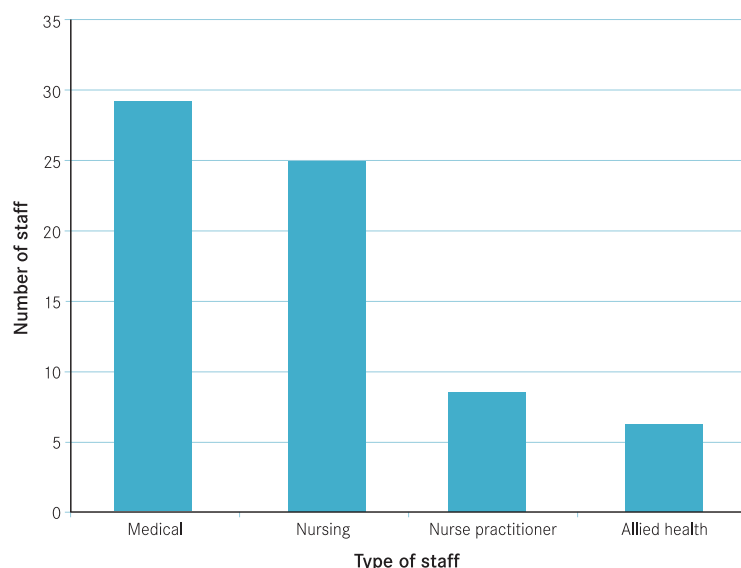
Type of facility utilised	Dedicated resource	Flexible or shared resource	Not designated	Total
Chairs	16	14	2	32
Cubicles	25	26	12	63
Total	31	30	27	95

Half of the hospitals that operated a fast track service in 2006 provided a permanent space dedicated to fast track services. The other half utilised a flexible space that could be used for other purposes when the fast track service was not operating.

2.4 Resources and skill mix

2.4.1 Staffing

In 2006, 68.4 staff were employed in fast track services each shift, 42 per cent were medical staff, 48 per cent nursing staff and 9.5 per cent were allied health staff. On average 3.8 staff are employed per shift in each fast track service. The number and type of staff working in Victoria's fast track services is outlined in Figure 6.

Figure 6: Number and type of staff employed in fast track services

In 89 per cent of hospitals the service was staffed by a combination of medical and nursing staff each shift. Of the two hospitals where the fast track service was staffed by a single category of staff, one service was staffed by a doctor and the other by nurses.

As Table 3 illustrates, 42 per cent of staff employed in a fast track services each shift in 2006 were medical staff. Thirty five per cent of the medical practitioners worked as the sole medical practitioner in the service. The level of medical staff working in fast track services varies with nine

hospitals employing consultants, nine senior registrars, five hospital medical officers (HMOs) years 2–3, two junior registrars and two interns.

Forty-eight per cent of the staff employed in a fast track service each shift in 2006 were nursing staff, with 24.5 per cent of these nurse practitioners. All the nurse practitioners and 40 per cent of the nurses worked as the sole nurse in the service. The level of nursing staff working in the fast track services are mostly senior staff with 12 hospitals employing Division one nurses (many with three or more years' experience) and four using clinical nurse specialists (CNS). Four hospitals employed nurse practitioners and five nurse practitioner candidates. Only two hospitals employed Division 2 nurses in their fast track services.

Table 3: Number and type of staff employed in fast track service by number of hospitals

Type of staff	Number of staff employed in fast track services					Total staff No.	Total staff %
	<One staff	One staff	Two staff	Three staff	>Four staff		
Medical	1	9	3	3	1	28.8	42.1%
Nursing	–	10	1	1	2	25.0	36.5%
Nurse practitioner	2	6	–	–	–	8.1	1.8%
Allied health	1	1	1	1	–	6.5	9.5%
Total	4	26	5	5	3	68.4	100%

Four hospitals employed allied health staff in their fast track services. The type of staff employed were physiotherapists, occupational therapists and care coordinators.

2.4.2 Method of staffing

In 2006, 83.4 per cent of hospitals rostered staff to work in fast track services. One hospital rostered a nurse practitioner to the service and provided a senior consultant on an ad hoc basis when resources permitted. Two hospitals did not formally roster staff to the service. One provided a middle-grade medical officer to work with the triage nurse and the other assigned a senior clinician to the floor to allocate staff in an effort to maintain interest and rotation.

Of the 15 hospitals rostering staff to work in the fast track service, 86.7 per cent rostered their staff using a rotating roster. One hospital rostered a nurse practitioner to the service on a permanent basis with an emergency registrar rostered to cover periods where the nurse practitioner was unavailable.

2.5 Links with other services

In 2006 Victoria's fast track services linked to and used a variety of other services. The types of services utilised and the number of hospitals with fast track services that used them is shown in Table 4.

Table 4: Number of fast track services utilising various types of support services

Type of service	No. hospitals
Allied health	5
Care coordination	5
X-ray/pathology	4
Community-based services	4
Plaster technicians/wound nurse hand therapy	3
Psychiatric services	2
Fracture/soft tissue clinic	2
Range of services available in ED	1
Outpatients	1

2.6 Type of services provided

Hospitals were asked to indicate the type of fast track services they provided to consumers presenting to the ED. The service varied according to the dispositional status of the consumer. Details are presented in Table 5.

Table 5: Type of service provided to admitted and not admitted patients by number of hospitals

Type of service provided	Not admitted patients		Admitted patients	
	No. hospitals	Percentage	No. hospitals	Percentage
Initial assessment prior to treatment in ED	-	-	-	-
Assessment and commence investigations prior to treatment in ED	1	5.5%	2	11.1%
Assessment, treatment and then discharge or admission/transfer	10	55.5%	3	16.7%
Other	1	5.5%	2	11.1%
All or a mix of above services	6	27.8%	5	27.8%
None, not for admitted patients	-	-	6	33.3%
Total	18	100%	18	100%

2.6.1 Services to non-admitted patients

Table 5 details the type of fast track service provided to non-admitted patients in 2006. Some 55.5 per cent of hospitals had a fast track service that provided assessment and treatment and then discharged the patient. Some 27.8 per cent of services provided a mix of initial assessment and investigation and then treatment in the ED.

Two hospitals said they provided other services. One provided medical assessment and treatment for category 4 and 5 patients that did not need a cubicle bed. The other hospital indicated that analgesia and splints were provided in the waiting room, that medical staff signed X-ray requests for simple distal limb injuries and blood request forms and that pathology was taken so results were ready for when patients were seen in main ED.

These responses indicated over half the fast track services cared for patients for their entire hospital episode. The remaining services provided initial assessment and investigation and then transferred the patients to the ED for treatment prior to discharge.

2.6.2 Services to admitted patients

Table 5 shows that initial assessment, investigation and treatment processes are utilised to fast track the journey of patients being admitted to an inpatient bed as well as those discharged directly from the ED.

While a third of the hospitals did not use fast-track-type services for admitted patients, 66.7 per cent of the hospitals utilised fast track type services such as initial assessment, investigation and treatment prior to admission or transfer of patient to an inpatient bed (see Table 5).

Other services were provided at two health services. One ED utilised the fast track service for patients requiring minor investigation and then an admission such as a laceration requiring a plastics admission. The other hospital had a system whereby ED patients could be fast tracked to a ward where an inpatient registrar would review the patient.

2.7 Effectiveness of fast track services

Fast track services in were first trialled in North American hospital EDs in the late 1980s and then a decade later in the United Kingdom.²³ The studies dating from this period and subsequent years in Australia and overseas indicate that fast track services are associated with:

- significant reductions in patient length of stay in the ED resulting from shorter waiting and transit times^{24 25 26}
- significant improvement in patient satisfaction including reduced aggression and complaints

23 O'Brien D, Williams A, Blondell K, Jelinek GA 2006 'Impact of streaming "fast track" emergency department patients', *Australian Health Review*, Vol.30 No. 4 pp. 528–530.

24 Sanchez M, Smally AJ, Grant RJ, Jacobs LM 2006, 'Effects of a fast track area on emergency department performance', *The Journal of Emergency Medicine*, Vol 31, No.1, pp. 118–120.

25 Kwa P, Blake D 2008 'Fast track: Has it changed patient care in the emergency department?', *Emergency Medicine Australasia*, 20, pp. 11–13.

26 Kelly AM, Bryant M, Cox L, Jolley D 2007, 'Improving emergency department efficiency by patient streaming to outcomes-based teams', *Australian Health Review*, Feb;31(1):16–21.

- significant improvement in staff satisfaction and morale, including increased time available for education and supervision^{27 28}
- a reduction in the number of patients leaving before being seen²⁹
- improved patient throughput and bed utilisation across the ED
- reduced access block
- patient cost savings
- less overall time in the ED by all groups of patients^{30 31}
- a reduction in the average number of patients in the ED at any one time.³²

The first Australian case-controlled study to evaluate the effect of fast track services on ED performance and patient flow was conducted at The Northern Hospital during 2007.³³

The key findings of the study showed:

- a statistically significant decrease in median length of stay in the ED for discharged fast track patients by 16 minutes
- significantly more fast track patients discharged in less than two hours and less than four hours
- no marked difference in median length of stay in the ED for other ED patients after implementation of fast track, which implies fast track has not had a detrimental effect on other patients.

A sub-analysis of patients with wrist fracture examined frequency of and time to analgesia and radiology. The findings showed:

- increased use of analgesia among fast track patients
- no statistically significant change in time to analgesia but a clinically significant decrease in time to pain relief for Australian Triage Scale (ATS) 5 patients
- significant 36-minute reduction in median time to X-ray for fast track patients with wrist fractures.

In summary, there is substantial evidence that fast track services provide an efficient and effective way of caring for people who present to an ED with minor illnesses and injuries, one which does not have a detrimental effect on other patients being treated in the ED.

27 Dann L, Fox D, Sonntag P, Ieraci S 2007, *The fast track system: how to make it work. One emergency department's experience. Presented at the Improving the Delivery of Emergency Care: sharing the lessons learnt conference, Brisbane.*

28 Rodi SW, Grau MV, Orsini CM 2006, 'Evaluation of a fast track unit: Alignment of resources and demand results in improved satisfaction and decreased length of stay for emergency department patients', *Quality Management in Health Care, Vol. 15, Issue 3, pp. 166–167.*

29 Sydney South West Area Health Service 2008, *Fast track – A plan to reduce waiting times in an emergency department. Available at: <www.archi.net.au/elibrary/health_administration/awards06/innivation/fast_track>.*

30 Nash K et. al. 2007 *Evaluation of the fast track unit of a emergency department, Journal of Emergency Medicine, 33(1) pp. 14-20.*

31 Combs S, Chapman R, Bushby A 2007, 'Evaluation of fast track', *Accident and Emergency Nursing, 15, pp. 41–47.*

32 King DL, Ben-Tovin DI, Bassham J op. cit. pp. 393–395

33 Considine J, Kropman M, Kelly M, Winter C 2007, *Effect of fast track service on emergency department performance and patient flow. Presented at the 6th International conference for emergency nurses, Melbourne.*

3. Initiatives in fast track

Fast track services have been operating in Victorian EDs since the beginning of this decade. During this period, a range of initiatives have been introduced at various steps in the patient care pathway to improve processes and the timeliness and quality of services. These initiatives, the underlying issues they were designed to address and associated learnings are presented in this section of the paper.

The initiatives have been grouped according to the major steps in patient care outlined in Table 6 and include:

- triage
- clinical nursing and medical work-up
- investigations
- treatment
- discharge or admission.

For ease of presentation, initiatives relating to associated care processes and the movement of patients between different locations are addressed at the relevant step in patient care.

Table 6: Generic process for patients presenting to an emergency department with less serious illness or injury

Step in patient care	Triage	Clinical work-up (nursing)	Clinical work-up (medical)	Investigations	Treatment	Discharge or admission
Location	Waiting room	Cubicle	Cubicle	Radiology	Cubicle/ treatment/ plaster room	Community or inpatient or sub-acute ward
Associated care processes				Radiology Pathology Care coordination Allied health HITH Pharmacy		Care coordination Pharmacy

3.1 Triage

3.1.1 Patient streaming initiatives

According to process redesign principles, care processes that are sufficiently similar can be grouped into value streams. These value streams can be managed separately to increase the overall efficiency and reliability of the care processes involved.³⁴

In Victoria, ED care processes have been segmented into a number of value streams³⁵ including the:

- resuscitation stream
- complex care stream
- fast track stream.

³⁴ King DL, Ben-Tovin DI, Bassham J, *op. cit.* p. 395.

³⁵ Additional value streams that are currently emerging within EDs centre on short stay units and observation medicine.

The process of streaming patients commences at triage with staff identifying particular classes of consumers for assessment and treatment by dedicated teams in a designated areas of the ED. Once triage staff has screened consumers according to the ATS, consumers will be allocated to one of three streams of care in the ED. This process of streaming patient care is a key element of the fast track model of care.

The separation of value streams within the ED can occur in a variety of ways³⁶ and this is reflected in the different criteria used various health services to stream consumers to fast track services. In Victoria, streaming decisions are made according to one of the criteria set out below.

Criteria	Description
Probability of discharge	Consumers considered likely to be discharged home are streamed to fast track services and patients considered likely to require a hospital admission are directed to other care streams.
Diagnostic group	Consumers presenting with a minor injury and illness are streamed to fast track services.
Acuity by triage category	Consumers allocated a triage category 3, 4 or 5 are streamed to fast track services.
Acuity of care	Consumers requiring simple care are streamed to fast track services while those requiring complex care are directed to other care streams.

Triage decisions are crucial to patient flow through both the ED and fast track streams. Where fast track is used for consumers requiring complex care or admission to an inpatient bed, the flow of people with less serious illnesses and injuries through the ED is curtailed. Recent studies show triage nurses are able to predict patients likely to be discharged with about 90 per cent accuracy in patients with injuries and febrile illnesses and are less accurate in those with more complex medical problems.³⁷

Consumers allocated to the fast track stream are attended to in order of arrival. Other patients are seen according to the urgency and acuity of their condition in timeframes established in the ATS.

All consumers attending the ED share the same waiting room and are under the care of the triage staff.

³⁶ King DL, Ben-Tovin DI, Bassham J, *op. cit.* pp. 395–396.

³⁷ Holdgate A, Morris J, Fry M, Zecevic M 2007, *Accuracy of triage nurses in predicting patient disposition Emergency Medicine Australasia*, 19, pp. 343–344.

Learning from streaming initiatives

- Streaming shortens patient waiting and transit times thereby significantly reducing patient length of stay in the ED.
- Streaming reduces the number of patients leaving before being seen.
- Streaming significantly improves patient satisfaction and reduces aggression and complaints.
- Streaming improves staff satisfaction and morale.
- Physical facilities are required to accommodate streaming.
- Consumers do not understand streaming and the associated differences in queuing practices. Colour coded name bands have facilitated the process of public education.
- Cultural change is required for staff trained and practiced in queuing consumers according to urgency and acuity as specified in ATS. The link between the ATS and key performance indicators reinforces this approach. Alternatively, streaming could be based on principles of best care and equity of access not ATS requirements. Fast track patients could then be treated in order of arrival.
- ED care processes need to be mapped to separate out value streams and determine criteria for allocating patients to fast track services. The demographics of the ED population and the demand for services also need to be considered in establishing a fast track service.
- The accuracy of triage staff in streaming of consumers determines patient flow through fast track services and staff satisfaction in fast track service.
- The ability of fast track services to create additional capacity that benefits other streams of care is counter intuitive and difficult for staff to appreciate. This can result in the closure of fast track services as demand for ED services rises.³⁸
- Once value streams are established dedicated resources need to be allocated to prevent the closure or blockage of fast track services.
- Streaming arrangements need to be permanent to ensure service becomes established.

3.1.2 Medically assisted and enhanced triage initiatives

Medically assisted triage

Medically assisted triage (MAT) has operated at a number of hospitals over the past decade. MAT involves a consultant (FACEM) working in the triage and waiting room area to improve patient flow by:

- initiating and providing treatment in the waiting area
- conducting basic examinations and assessments
- ordering pathology and radiology investigations
- arranging referrals for outpatient services from waiting area.

38 Results of fast track survey January 2006 indicate 13 hospitals reported the availability and mix of the ED workforce influenced the hours of operation of fast track services. Seven hospitals indicated that they reduced their fast track services when ED activity increased, particularly where there was an increase in higher acuity presentations. Department of Human Services 2007, Results of fast track survey January 2006 (unpublished).

A room suitable for brief examinations that is accessible from the waiting room enhances the work of the MAT.

Enhanced triage

The role of triage staff can be enhanced to incorporate activities that improve patient flow through fast track services, including nurse and allied health initiated:

- pathology and radiology requests
- analgesia
- limb injury management including POP checks
- screening of patients requiring specialist follow-up.

A number of hospitals have utilised enhanced triage arrangements that have involved clinical intervention teams, nurse practitioners, assessment nurses and allied health practitioners working in the triage and waiting room area.

Medically assisted and enhanced triage initiatives

The learning associated with the MAT and enhanced triage initiatives include:

- Suitable patients can be seen in and sent home from the waiting room thereby reducing the demand on ED services.
- Decisions can be made quickly and in a manner that reduces risk.
- MAT provides better quality of care to consumers in the waiting room and those arriving by ambulance.
- Psychological advantage to patients from seeing a doctor and care provided in waiting room.
- Quicker intervention and reduced overall length of stay for category 3 patients.
- Investigations can be ordered immediately, which reduces the time patients spend waiting for pathology and radiology results.
- MAT can lead to a lack of clarity around the role of consultants and nurses in triage area.
- The availability of consultants within the ED reduced.
- The work in MAT lacks the variety, continuity and challenge ED work generally affords consultants.
- Scope of practice of MAT staff aligns with that of a nurse practitioner or senior nursing staff.
- Additional triage staff required to accommodate increased workload from enhanced triage services.
- Triage workload can compromise complex processes involved in initiating, completing and following through radiology requests.

3.2 Clinical nursing and medical work-up

Fast track services are for consumers presenting with minor illnesses and injuries who are likely to be discharged back to the community. The stream accommodates high numbers of similar, low-acuity presentations with shorter treatment times. The type of work undertaken requires:

- a high level of decision making to facilitate patient flow
- a more integrated approach that combines assessment, treatment and discharge processes traditionally assigned to different practitioners
- a significant level of clerical and patient service attendant work
- a high level of staff skill and competency
- staffing stability
- capability in processes redesign and clinical leadership.

The volume, pace and demands of the work undertaken in the fast track services have created challenges for traditional practices and processes around the nursing and medical work-up steps in the patient care journey.

Patient work-up processes

The learning points associated with clinical nursing and medical work-up processes in fast track are as follows:

- Fast track needs to be staffed by senior medical, nursing and allied health staff to facilitate decision making and patient flow.
- Critical mass of senior staff is required to cover all areas of the ED. Triage and the complex care and resuscitation streams require senior staff to provide supervision for junior staff and to facilitate decision making and patient flow. Staffing requirements need to be balanced across all areas of the ED.
- Suitable training and recruitment are plans required to build overall capacity and competency of ED nursing staff to ensure sufficient senior staff is available across all areas of the ED.
- The work in fast track stream lacks the variety, continuity and challenge ED work generally affords medical consultants.
- The type of ED work offered to medical staff influences the capacity of health services to recruit and retain staff.
- Fast track is predominantly staffed through rotating rosters. Lack of staffing stability limits opportunities for continuous improvement processes that are an integral part of redesign activities.
- Senior staff with experience in redesign processes are needed to provide the clinical leadership necessary to implement and imbed changes.
- Clerical, technician and patient service attendant support is required to address the demands generated by high patient turnover. Effective IT systems can also be utilised.
- Rostering additional nursing staff during peak periods can address the variation in demand for fast track services.
- Allied health staff can be effectively utilised to manage musculo-skeletal injuries and to facilitate discharge processes. They also enhance the range of staff available for the fast track stream.

- Triage staff rotating through fast track services ensures staff are familiar with type of services provided, which refines decision making processes at triage and promotes effective streaming of patients.
- Forward assessment component of patient work-up processes increases use of analgesia in fast track patients and decreases time to patient pain relief.³⁹

The various workforce redesign initiatives that have been implemented to accommodate these learning points are presented in the following sections. These initiatives reflect the goals of the department's *Better Skills, Best Care workforce design strategy*⁴⁰ that are designed to create a flexible and suitably qualified workforce that will meet current and evolving patient needs.

3.2.1 Nurse-operated service

A number of hospitals have engaged their senior nursing staff to operate the fast track service. The features of these staffing arrangements are as follows:

- service is staffed by experienced nurses including clinical nurse specialists and triage staff
- medical staff are available to provide support on request
- nurses perform rostering functions to ensure adequate senior nursing staff coverage across the whole ED
- the service is supported by IT systems and discharge resources.

The learning points associated with nurse-operated services are shown below.

Nurse-operated service

- Senior nurses are afforded and value increased autonomy and scope of practice.⁴¹
- Nurses can employ a whole-of-patient care focus that spans the entire patient journey and includes patient education and health promotion activities.
- Staff have a more proactive role and have greater opportunity to manage their workload.
- Nurses find the work more satisfying and rewarding.
- It provides a valuable developmental role for senior nurses and increases the number of experienced senior staff in the ED. This in turn enhances the flexibility of the whole ED workforce.
- Improved balance in staffing requirements across all areas of the ED.
- Familiarity with service refines decision making processes at triage and promotes effective streaming of patients.
- The service is staffed by a particular group of nurses which lends stability and continuity to service.
- Permanent employment in fast track limits the supervisory and mentoring roles of senior nurses across all areas of the ED.

³⁹ *Considine J, Kropman M, Kelly M, Winter C, op. cit.*

⁴⁰ *Department of Human Services 2007, Better Skills, Best Care workforce redesign strategy.*

Available at: <<http://www.health.vic.gov.au/workforce/skills.htm>>.

⁴¹ *Nursing Board of Victoria 2007, Guidelines: Scope of nursing and midwifery practice, Melbourne.*

3.2.2 Nurse practitioner service

Nurse-practitioner-led services are now widespread across Victorian emergency care health services. The key learning points associated with this initiative are outlined below. The knowledge gained from nurse-operated services is also applicable to the nurse practitioner (NP) service.

Nurse practitioner service

- Advanced and extended practice supports key activities undertaken in the fast track service.
- NPs transcend traditional boundaries around roles and functions of nursing and medical staff.
- NPs may preclude the need for a medically led service.
- The time, supervision and resources committed to training and qualification for NPs to only function in fast track services may not represent value for money when other experienced senior nurses can also operate fast track services.
- The number of patients treated is greater and the continuity of care is improved in fast track services with a dedicated NP.
- Patient satisfaction with NPs is very high.
- Fast track represents only one of the roles NPs can undertake in emergency care. NPs don't want to be confined to the fast track role.
- Services can be staffed by either NP or registrars to provide greater flexibility in staffing and rostering and to increase the hours of operation of fast track services.

3.2.3 Team-structured service

Some hospitals have adopted a team-based staffing structure in their fast track services. The teams are comprised of a permanent staff member (usually a nurse practitioner) with other senior nursing, medical and allied health staff allocated on a rotating basis. The key learning points associated with this initiative are outlined below.

Team-structured service

- A permanent staff member provides continuity, supports the team and is able to establish and maintain relationships with other key areas within the hospital and the ED such as radiology, pathology, outpatients and plastics and orthopaedic departments.
- Staff are afforded greater opportunity to manage the pace of their work.
- Teamwork models engender trust and staff commitment.
- Team structures with effective decision making processes cushion negative aspects of a high-volume, fast-paced work environment, particularly for medical staff.
- All team members find the work more satisfying and rewarding.
- Team structures provide opportunities to utilise staff on the basis of required skills and competencies. Potentially a wider range of staff can be utilised in fast track services under a team arrangement.

3.2.4 Other workforce initiatives

Other workforce initiatives utilised in fast track services include:

- employing career medical officers and general practitioners (GPs) in the fast track stream
- collocating ED physiotherapy service so physiotherapist can assist with fast track patients
- using interns and technicians for procedural work.

Two rural hospitals and one metropolitan hospital are piloting a clinician assistant and an operations assistant in their hospital EDs under the *Better Skills, Best Care strategy*. These new positions provide a non-clinical support role.

A clinical nurse consultant has been appointed to a rural hospital to provide a clinical resource, clinical advisory and development role and to undertake related projects and research. Health services often utilise this role for clinical consultancy in the areas of infection control, diabetes and continence advice.⁴²

3.3 Investigations

A variety of care processes are associated with investigating and treating a patient's presenting conditions. These processes involve obtaining services from other providers within the hospital or the ED itself. A range of initiatives have been introduced to streamline investigative processes and align them with the care processes of the services providing diagnostic and assessment services. Details are presented below.

3.3.1 Nurse-initiated pathology and radiology requests

The time patients wait for pathology and radiology results can be significantly reduced by forwarding requests for these services as early in the care process as possible⁴³ and by using clinical guidelines and pathways. Traditionally medical staff have ordered pathology tests and imaging services during the clinical work-up process.⁴⁴ A number of hospitals have altered their processes and introduced nurse-initiated pathology and radiology requests during triage or as part of a forward assessment by a nurse from the fast track service. These initiatives have involved:

- developing and providing structured education programs
- providing feedback, monitoring and regular quality checks
- establishing auditing processes
- developing and implementing protocols and guidelines.

42 See <<http://www.health.vic.gov.au/workforce/skills.htm>>.

43 Tambimuttu J, Hawley R, Marshall A 2002, 'Nurse-initiated X-ray of isolated limb fractures in the emergency department: research outcomes and future directions', *Australian Critical Care*, 15(3) pp. 119–122. Bernath V 2000, *Nurse-initiation of X-rays of possible limb fractures in hospital emergency departments*, Clayton. Fry M, 2001, *Triage nurses order X-rays for patients with isolated distal limb injuries: A 12-month ED study*, *Journal of Emergency Nursing* 27(1) pp.17-22.

44 Department of Human Services 2004, *Victorian Nurse Practitioner Project: Report of the Nurse Practitioner Implementation Advisory Committee*, Melbourne, pp. 23–30.

Nurse-initiated pathology and radiology requests

- Early initiation of requests significantly reduces the time patients wait for an X-ray and therefore their overall length of stay in the ED.⁴⁵
- Triage workload can compromise complex processes involved in initiating, completing and following through radiology requests.
- Additional triage staff may be required to accommodate increased workload from initiating pathology and radiology requests.
- Fast track service can be structured to include a forward assessment nurse to initiate investigations and reduce workload of triage services.
- Nurses have the opportunity to work with patients to promote best practice approaches and minimise unnecessary ordering of radiology services.
- Training packages to support nurse-initiated requests developed separately at each health service. A statewide approach involving an established protocol for a specified condition would reduce variation and could apply across a multidisciplinary team of practitioners.

3.3.2 Streaming of radiology services

Hospital EDs obtain imaging services from the hospital radiology department or a satellite service operating within the ED. Radiology requests from the fast track services would be considered and prioritised along with requests from other ED care streams and other parts of the hospital, particularly after hours. Traditional triaging arrangements employed within the radiology department would result in fast track patients waiting significant periods for results.

A number of hospital EDs have worked with their radiology departments to develop alternative work practices so radiology requests from the fast track service can be expedited to maintain patient flow through the ED.⁴⁶ Features of these initiatives include:

- developing common objectives around provision of timely assessment, treatment and discharge of people seeking primary care type services
- providing requests early in the patient care process
- processes to flag requests from fast track services
- revised scheduling processes in radiology that allow simple X-rays between complex procedures
- communication between services to facilitate patient movement between services
- restructure of radiology facilities to provide a distinct area for fast track service patients.

⁴⁵ *Considine et. al., op. cit.*

⁴⁶ *Flinders Medical Centre 2008, Redesigning care, February.*

The learning associated with streaming of radiology services is outlined below.

Streaming of radiology services

- Prioritising of radiology requests reduces time waiting for radiology services.
- Scheduling processes of radiology services are influenced by radiology infrastructure such as availability of CT scanner and satellite services in ED.
- Common objectives are required to ensure services are aligned and requests are appropriately prioritised.
- Fast track services need to align with radiology and pathology services to operate effectively.

3.3.3 Use of non-radiographers for plain X-rays

In rural Victoria, where there are limited or no radiographic services, there is potential for an increased number of appropriately trained health professionals to undertake plain film radiography.⁴⁷ In Victoria, the Department of Human Services has the authority to issue a 'use license' to nurses and GPs. While it is difficult to ascertain the number of practising non-radiographers in the state, some 172 GPs and five nurses hold currently hold licenses. Both Queensland and Western Australia have in excess of 400 licensed X-ray operators practicing in accordance with guidelines to ensure appropriate and safe patient imaging. In New South Wales and South Australia approximately 200 nurses and 50 GPs, and 122 nurses, hold licenses respectively.⁴⁸

The practice of non-radiographers taking plain X-rays is not new. Nurses, doctors and allied health staff in rural and remote areas have been performing this task for many years and World Health Organization data suggest 80–90 per cent of plain radiography is performed by non-radiographers.⁴⁹

In many Victorian rural health services GPs and radiographers are not onsite 24 hours per day. Small rural health services (SRHS) are supported by visiting medical officers and the majority do not have access to on-call radiographic services. The ability to provide care in the local setting is impeded by non-medical staff being unable to undertake plain X-rays. A recent survey of SRHS directors of nursing indicated 93 per cent of respondents could foresee a role for nurses to undertake plain X-rays.⁵⁰

The Department of Human Services is currently examining options that will enable more nurses to initiate plain X-rays in rural health services where this is clinically and operationally appropriate and will improve patient outcomes.

47 Plain film radiography refers to an X-ray examination during the course of which the X-ray tube and film remain stationary and no contrast medium is introduced into the patient.

48 Department of Human Services 2008, Rural emergency enhancement workshops, Melbourne.

49 Smith T, Jones P 2007, 'Remote X-ray operator radiography: A case study in interprofessional rural clinical practice', Journal of Interprofessional Care 21, pp. 289–302.

50 Email responses (2008) from 32 SRHS directors of nursing and remote area nurses.

3.4 Treatment

The care processes that are associated with patient treatment may involve using dedicated treatment facilities including procedure, plaster, consultation and eye rooms. The learning points associated with the physical facilities for fast track services are outlined below.

Physical facilities

- A location in close proximity to procedure and treatment rooms reduces the waste associated with staff and patient movement and facilitates timely treatment and patient flow.
- Collocation or proximal location to allied health services facilitates liaison and joint work across care streams.
- Locating fast track near the waiting room and triage area provides capacity for forward assessment processes from the fast track service. It also reduces traffic of staff and patients through the ED.
- The availability of a consultation room adjacent to triage and waiting room ensures patient privacy and facilitates forward assessment processes.
- Sub-waiting area for the fast track area enhances patient flow and forward assessment processes.
- Dedicated areas in the ED supports patient streaming and distinct patient management and care processes.
- Separate waiting areas for different care streams addresses consumer and staff concerns about prioritisation of patients and waiting times.
- Physical isolation of fast track stream from rest of the ED is a concern to staff.

Treatment processes are also supported by workforce initiatives such as nurse practitioners and advanced practice nursing roles, allied health practitioners working in or across the fast track stream and the use of interns and technicians for procedural work (see Section 3.2 for details on the various workforce initiatives in fast track services).

3.5 Discharge or admission

The final step in the patient care process in the fast track stream is usually discharge back to the community. In a few cases such as patients requiring plastic surgery, the patient will be admitted to an inpatient bed. The care processes associated with patient discharge may involve liaison with and referral to external services or other service providers within the hospital or the ED including:

- care coordination
- ED physiotherapist and other allied health services
- pharmacy
- specialist services such as plastics and orthopaedics.

To date, initiatives that align fast track care processes with those of care coordination, physiotherapy and pharmacy services have been limited. One rural and two metropolitan hospitals have amended the physiotherapy role in their ED as part of the *Better Skills, Best Care strategy* to provide a primary contact to assess, diagnose and manage patients with soft tissue injuries and minor fractures.⁵¹

A number of Victorian EDs have introduced clinical pharmacy services and an unpublished evaluation of a service funded under the Quality Improvement and Best Practice Project in 2002 found the service showed improved antibiotic prescribing compliance, decreased time to adequate pain control and increased reporting of adverse drug reactions.⁵² Other studies outline the changes that accompany changes in the relationship with and structure of pharmacy services in the ED.⁵³

In 2007–08 the Rural Collaborative Practice Model engaged clinicians, health managers and government in action research to develop strategies to ensure the sustainability of rural emergency services in Victoria. Key barriers to achieving a more effective emergency care model where doctors were called in only for the urgent and complex presentations and nurses were able and willing to manage more non-urgent presentations on their own, included legislation relating to drug supply. The current legislation limits nurses' capacity to manage many non-urgent presentations without calling a doctor.

The Department of Human Services has consulted on a proposal to change the *Drugs, Poisons and Controlled Substances Act (1981)* and *Health Professions Registration Act (2005)* to authorise appropriately trained registered nurses (Division 1) working in rural Victoria to supply medicines for specific conditions, under certain circumstances and according to evidence-based protocols.⁵⁴ This proposal is progressing and may be considered by Parliament early in 2009.

The role of ED care coordination services is to facilitate access to community-based services and ensure the safe and timely discharge of patients to the community. Care processes undertaken by the care coordination service include screening, assessment, referral and interventions such as the provision of aids and equipment. These care processes need to align with fast track care processes to reduce patient length of stay in the ED and promote patient flow. Process and workforce redesign initiatives that address the alignment between pharmacy, care coordination and physiotherapy services and fast track services and may represent areas of future development.

Figure 7 summarises the care processes associated with the fast track services and the various initiatives that have or may be introduced to enhance the operation of the service.

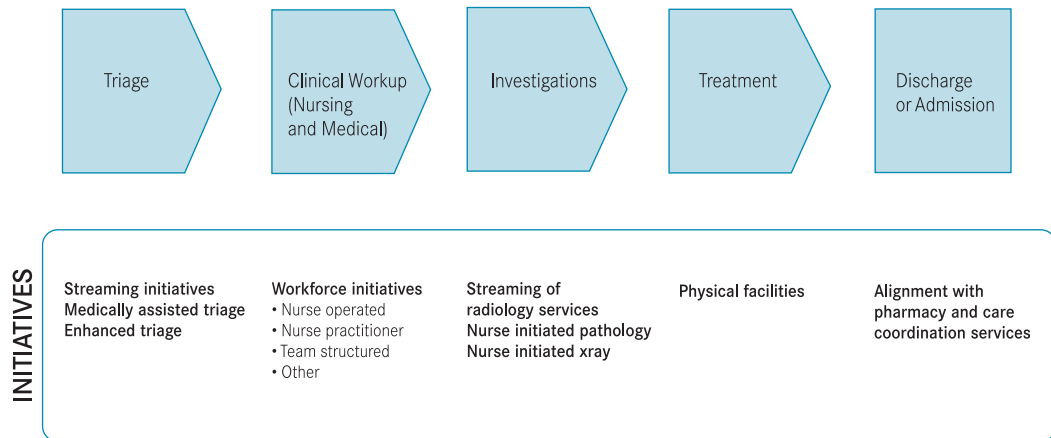
51 See <<http://www.health.vic.gov.au/workforce/skills.htm>>.

52 Taylor D, Bennett DM, Cameron PA 2004, 'A paradigm shift in the nature of care provision in emergency departments', *Emergency Medicine Journal*, 21: pp. 681–684. Quality improvement and best practice funding program 2006, *Improving medication management*. Available at: <www.health.vic.gov.au/archive/archive_2006/qualfund/workshops/im_medication.....>.

53 University of Rochester Emergency Medicine, *The emergency pharmacist research is available at: <<http://www.emergencypharmacist.org.au/toolkit.html>>*. Conner GP, Hays DP 2007 'Emergency department drug orders: Does drug storage location make a difference?' *Annals of Emergency Medicine* 50 (4) pp. 414–418.

54 Department of Human Services 2008, *Sustaining rural emergency services – Proposal for nurses to supply medicines: A discussion paper, Melbourne*.

Figure 7: Fast track care processes services and the initiatives introduced to enhance the operation of the service.



4. Enablers

The introduction and continued development of Victoria's fast track services has been supported by a range of enablers. The key enablers are outlined below.

4.1 Staff training

Health services have developed specific training packages to support nursing staff working in fast track services. The areas covered in training include:

- nurse-initiated radiology and pathology requests
- assessment and intervention skills to support timely and independent decision making
- procedures such as suturing, wound care management, plastering, splinting, plaster of paris checks
- provision of aids and equipment
- analgesia
- objectives and targets for service and care pathways
- patient discharge and supporting community and ED resources.⁵⁵

The training is provided by relevant departments and services such as radiology, pathology, allied health and care coordination.

In addition to the specific nurse training packages outlined above, an overall ED training and recruitment plan that builds the capacity and competency of all ED nursing staff is a key enabler for fast track services as it ensures there is critical mass of senior staff is required to cover fast track, triage and other care streams in the ED.

4.2 IT systems

Suitable IT systems are another key enabler for fast track services. This includes electronic patient management systems that have facility for:

- recording patient attendances and length of stay
- flagging pathology and radiology requests from fast track to expedite processing
- flagging need for care coordination service
- completing patient record
- notifications to GP
- discharge documentation.

⁵⁵ Department of Human Services 2007, Results of fast track survey January 2006 (unpublished).

4.3 Capacity to undertake process redesign

Process redesign capability is a pivotal enabler for health services undertaking or re-engaging in redesign activities around fast track services. Health services that introduced fast track services as part of the Patient Flow Collaborative found the breakthrough methodology was a key enabler in developing redesign and change management capability and in project implementation. Key success factors included staff engagement, clinical champions, a multidisciplinary approach, senior staff support, data collection and feedback and adequate time for the project.

Currently, the Redesigning Hospital Care Program is funding the establishment of redesign units in health services and will provide them with necessary tools, techniques and support to engage in process redesign. Project delivery will involve ideas and solution generation, data gathering, testing, measuring 'Plan, Do, Study, Act' cycles and implementation. Each project management and redesign method will have its own approach to staging and reporting, which will be managed by individual health services.

4.4 Governance and regulation

Over the past decade there has been a national move towards using decision-making frameworks to support contemporary nursing and midwifery practice decisions. In 2007 the Nurses Board of Victoria released *Guidelines: Scope of nursing and midwifery practice*, which provides guidance to nurses and health services making decisions about everyday practice and changes to their practice over time. Using a principle-based approach a series of threshold questions are posed to assist nurse and employers decide if a practice is appropriate.⁵⁶ The nursing regulatory framework is a key enabler for fast track workforce initiatives that involve changes in nurse practice.

The implementation of clinical governance and credentialing processes in health services have also enabled advanced practice roles to be developed and implemented.

⁵⁶ See <http://www.health.vic.gov.au/nursing/career/what_can_nurses_in_victoria_do>.

5. Key topics for discussion

Streaming care: Fast track services in Victorian hospital emergency departments documents the various fast track initiatives undertaken by Victorian health services over the past decade and the learning and developments associated with these changes. It aligns with the department's Redesigning Hospital Care Program, a four-year statewide initiative aimed at building health service capability to create, spread and sustain improvements in the delivery of patient care through the application of process redesign methodologies.

The discussion paper has been prepared as a background paper for the Streaming Care: Fast Track Services Forum, a workshop for ED practitioners to consider the past and future service developments in fast track services and to support health services to re-engage in the process redesign activities that underpin this model of care. The aims of the paper are to:

- facilitate an exchange of learning and information between health services on fast track initiatives
- identify enablers and new initiatives that may promote further innovation and streamlining of fast track services
- identify opportunities to align care processes across services and patient care pathways.

The key topics for discussion and associated questions to promote discussion are outlined in the table opposite.

The Streaming Care: Fast Track Services Forum will provide health services with an opportunity to identify and scope ED redesign projects that could form part of the Redesigning Hospital Care Program.

The Redesigning Hospital Care Program is being delivered in a staged approach to ensure health services have sufficient capability for sustainable redesign before engaging in redesign projects. Once health services have built their redesign capability there is an opportunity to obtain funding for specific redesign projects around fast track. The program, in conjunction with redesign units, will provide health services with necessary tools, techniques and support to plan, deliver and measure improvements in fast track services.

A collective project will be considered where a number of health services are interested in undertaking redesign processes around the same service or activity such as theatre utilisation.

At the forum, consideration will also be given to the ways health services may utilise the *Better Skills, Best Care workforce redesign strategy* as part of the process redesign in fast track services.

As process redesign activities are supported and strengthened by networking, sharing and learning opportunities, the Redesigning Hospital Care Program will provide consultant support to health services undertaking fast track projects to:

- assist with project evaluation reports
- provide a follow-up forum on the fast track projects to share the lessons learnt across health services and identify additional ED projects.

The fast track projects will also be featured on the Redesigning Hospital Care Program website.

Key topics for discussion

Consumer needs

What are the current and evolving needs of consumers attending EDs?

Streaming

Do the criteria for streaming patients to fast track services align with the needs of consumers presenting to the ED?

Eliminating waste

Have the care processes in the fast track stream been comprehensively mapped?

What are the major areas of 'waste' in the fast track stream? Consider those practices and actions that create queues, unnecessary movement and duplication and add to waiting times.

Care processes

How can the time patients spend waiting for investigation results be reduced?

What can be done to facilitate patient discharge in a timely manner?

Staffing

How can the workforce be configured to make the best use of available skills and competencies?

If an advanced practice physiotherapist worked in fast track, what would be their role?

What training needs to be provided to ensure teams have the skills and expertise required for the job?

Patient flow

How can patient flow through the fast track service be maintained and maximised?

Alignment of services and care processes

What are the key services that must be aligned with fast track services?

What is the most effective way to align fast track care processes with those of other key hospital and ED services?

Continuous improvement processes

How can a continuous quality and productivity improvement approach be incorporated into the fast track service?

Physical facilities

What are the key design features need to be considered when establishing a fast track service?

Appendix 1: Emergency Access Reference Committee – Primary Care Subcommittee

Chairperson	
Mr Bill Newton	Chief Executive Officer, General Practice Victoria
Members	
Dr Margaret Grigg	Assistant Director, Access and Metropolitan Performance, Department of Human Services
Ms Sylvia Barry	Manager, Primary Health Integration, Primary Health Branch, Department of Human Services
Dr Simon Young	Director Emergency Department, Royal Children's Hospital
Dr David Isaac	General Practice Liaison Service, St Vincent's Health
Dr Sharon Monagle	Senior Medical Adviser, Primary Health Branch, Department of Human Services
Ms Lorraine Xavier-Ambrosius	Manager, Care Coordination, Western Health
Ms Ann Maree Keenan	Executive Director Ambulatory and Nursing Services, Austin Health
Ms Sue O'Sullivan	Manager Emergency Program, Department of Human Services
Secretariat	
Ms Wendy Davis	Senior Project Officer, Emergency Program, Department of Human Services

Appendix 2: Victorian hospitals participating in fast track survey 2006

The Alfred
Austin Hospital
Box Hill Hospital
Bendigo Hospital
Casey Hospital
Dandenong Hospital
Frankston Hospital
Geelong Hospital
Maroondah Hospital
Monash Medical Centre
Royal Children's Hospital
St Vincent's Hospital
Sandringham Hospital
Sunshine Hospital
The Northern Hospital
The Royal Melbourne Hospital
Werribee Mercy Hospital
Western Hospital

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