

# Emergency Department Senior Assessment and Streaming Model of Care and Toolkit

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## SECTION 1

# Executive Summary

Emergency Departments (EDs) are experiencing increasing pressure due to rising patient presentations and emergency admissions in the face of a delay in access to available inpatient beds and other resources to meet this demand.

This mismatch places pressure upon the public health system to provide equitable and timely access to Emergency Care.

The National Health Reform Agreement on Improving Public Hospital Services includes the National Emergency Access Target (NEAT) to improve Emergency service accessibility. This requires ED patients to be admitted, referred for treatment or discharged within four hours. For most EDs and hospitals, meeting this target requires significant redesign of current process.

Assessment and initial or definitive management of patients that present to the ED is an area of the patient journey that is within the control of ED management and clinicians, although lack of physical space from overcrowding due to access block will impact on this “control”. Access block is related to this as it compromises the ability of an ED to efficiently use its resources, and requires a whole of hospital response to provide capacity and manage demand for services.

Currently, patients are often assessed later in the ED journey by a senior medical officer, which delays decision making and disposition. The ED Senior Assessment and Streaming(ED SAS) model enables earlier senior medical input and aims to reduce ED total length of stay through the principles of:

- Early Senior Medical assessment of patients, initiation of treatment and often, disposition decision immediately following triage.
- Streaming of patients who present to ED to the most appropriate area to complete their care. This may be within the ED e.g. the Acute Care area or Fast Track area; or the patient’s needs may be better addressed in an area outside the ED (e.g. direct referral to a Medical Assessment Unit or specialty inpatient unit) without the patient needing further detailed management in the ED.

An assessment of whether this model is suitable to be implemented should be undertaken by the Local Health District and ED staff. Implementation of this model is generally aimed at (but not limited to):

- EDs that have a high level of support to implement the model by hospital executive.
- EDs which are significantly evolved in terms of models of care (the model requires the ability to stream patients to appropriate care areas both within and outside ED)
- EDs that have sufficient, stable Senior medical staff coverage to support the model
- EDs that are ready to undergo a significant change in the way care is provided to patients.

Although the model is primarily aimed at high volume EDs, the concepts/elements of the model are easily applicable to smaller EDs (e.g. a team approach to patient care, senior decision maker at triage and streaming). EDs and hospitals implementing the model will obviously need to localise it to suit the individual needs of the ED, however the principles of the model should stay intact.

A detailed implementation toolkit is supplied with this model of care, taking staff through a 4 phase approach to implementation from initial project management to developing the operational requirements, implementation and evaluation.

## SECTION 2

# Emergency Department Senior Assessment and Streaming in NSW

## 2.1 Why ED Senior Assessment and Streaming as a model of care for NSW Emergency Departments?

Emergency Departments (EDs) are under pressure, and must utilise their staff and other resources efficiently . Presentations across all triage categories have increased by 21% since 2005 (Figure 1), resulting in increased workloads and delayed access to emergency care.

In 2005/06 only 1 NSW ED had attendances greater than 50,000, in 2010/11 this number increased to 11 NSW EDs with greater than 50,000 presentations (Figure 2). This persistent demand places pressure upon the public health system to provide equitable and timely access to Emergency Care.

A continual challenge exists in meeting the demand for emergency care and the requirement to optimise ED and hospital bed capacity. This must also be attained in the

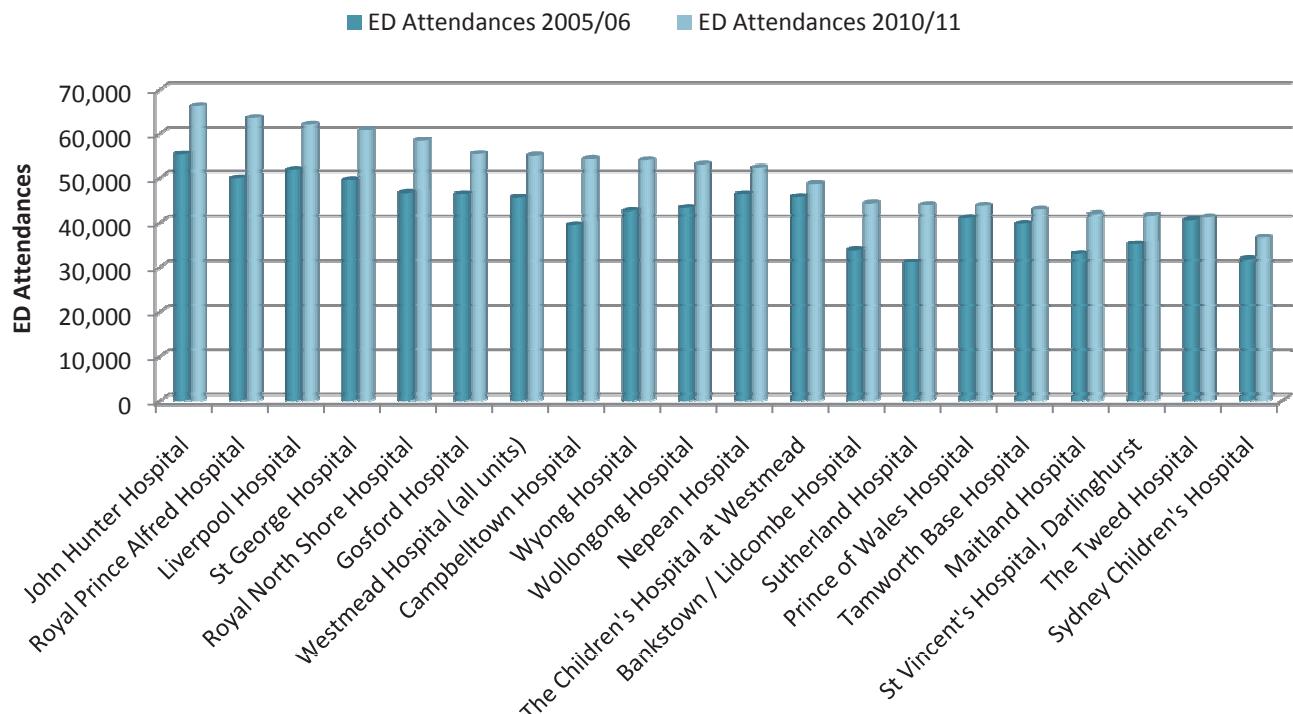
Figure 1 – NSW Health Annual Report: Total ED Attendances by Year 2000-01 to 2008-09 & \*DPE Predictions: 2009/10 to 2010/11



Source = NSW Health Annual Report:: Total ED Attendances by Year 2000-01 to 2009-10& \*DPE Predictions: 2011/12

Figure 2 – Source NSW Ministry of Health, Health Information Exchange extraction on 6th October 2011

## ED presentations have significantly increased since 2005 in our busiest EDs by Volume



context of safe, high quality patient care and efficient use of resources. In addition to this, The National Health Reform Agreement on Improving Public Hospital Services includes the National Emergency Access Target (NEAT) to improve access to emergency care. This requires ED patients to be admitted, referred for treatment or discharge within four hours.

As demonstrated in the tables below (Figures 3 and 4), current ED performance for patients admitted to hospital from ED within 4 hours is 19% and patients discharged or transferred from ED within 4 hours is 67%. A significant change needs to occur for NSW to meet the 4 hour NEAT.

ED overcrowding has been increasingly prevalent over 20 years<sup>1</sup>. Evidence around initiatives to address overcrowding suggests that there is a need to change current practices in EDs, hospitals and the community to

meet access targets and make better use of resources, and to maintain quality care delivery.

The limitations of current ED and hospital processes include:

- ED front-end processes not streamlined – processes include: patient arrival to registration, registration time, triage time, triage to bed placement, time to review by Clinical Initiative Nurse/nurse (if occurs), time to bed-placement, time to medical review. The patient usually encounters significant periods of waiting between each of these processes.
- Delay in the patient being assessed in ED by a senior decision maker (usually a senior medical officer)
- Patients being placed into a bed on arrival regardless of whether their presentation requires a bed. This can lead to subsequent bed block within ED rather than efficient use of bed

<sup>1</sup> Wiler J, Gentle C, Halfpenny J, Heins A, Mehrotra A, Mikhail M, & Fite D, Optimizing Emergency Front-End Operations, Annals of Emergency Medicine, 2010, vol 55, no.2, pp142-160

Figure 3 – Source NSW Bureau of Health Information Hospital Quarterly July to September 2011  
 Percentage of patients treated and admitted from NSW emergency departments, by triage level and time interval<sup>1</sup>, July to September 2011

	1 hour	2 hours	3 hours	4 hours	6 hours	8 hours	12 hours	24 hours
Triage 1: Immediately life threatening	9%	16%	26%	39%	62%	77%	88%	98%
Triage 2: Imminently life threatening	2%	5%	11%	21%	43%	63%	80%	96%
Triage 3: Potentially life threatening	1%	4%	9%	17%	37%	58%	78%	96%
Triage 4: Potentially serious	2%	5%	11%	19%	38%	59%	80%	97%
Triage 5: Less urgent	7%	15%	25%	35%	55%	72%	88%	98%
All triage categories	2%	5%	11%	19%	39%	60%	79%	96%

Figure 4 – Source NSW Bureau of Health Information Hospital Quarterly July to September 2011  
 Percentage of patients treated and discharged or transferred from NSW emergency departments, by triage category and time intervals, July to September 2011

	1 hour	2 hours	3 hours	4 hours	6 hours	8 hours	12 hours	24 hours
Triage 1: Immediately life threatening	5%	15%	29%	47%	72%	85%	94%	100%
Triage 2: Imminently life threatening	4%	15%	31%	47%	72%	85%	95%	99%
Triage 3: Potentially life threatening	7%	22%	39%	55%	78%	89%	96%	100%
Triage 4: Potentially serious	15%	37%	56%	70%	87%	94%	98%	100%
Triage 5: Less urgent	27%	52%	70%	82%	94%	98%	99%	100%
All triage categories	14%	34%	52%	67%	85%	93%	98%	100%

- Increasing number of undifferentiated patients in the ED waiting room who are at risk of deterioration.
- Lack of available beds in the hospital, resulting in access block in the ED. This leads to the management of ED patients and off load of ambulances in unsafe areas.

The ED Senior Assessment and Streaming model of care proposes to streamline the early assessment of Emergency patients presenting for treatment. It hinges on high quality, early, clinical decision making, and thus more efficient resource allocation from the outset. It addresses such activities as quick triage, an emergency patient flow streaming system based on the predicted treatment required and expected disposition, early initiation of patient management plans and timely integration with the ED and hospital patient flow management system.

Variations of the ED Senior Assessment and Streaming model of care have existed throughout NSW and Australia for many years. This document aims to describe several facets of ED Senior Assessment and Streaming recognised in ED processes. The model of care documented here

is based on a pilot of Emergency Department front end process redesign implemented at Westmead Hospital since February 2011. A variation of senior assessment following triage has also been implemented at Redcliffe Hospital in Queensland, and multidisciplinary triage, which is a similar model by another name, has been in place at the Austin Hospital in Victoria for more than 10 years.

## 2.2 What is ED Senior Assessment and Streaming(ED SAS)?

Optimizing ED throughput is an essential part of managing the increased demand for emergency services. The design and implementation of the (ED SAS) model of care is a practice aimed at improving front line processes such as triage and includes early streaming of patients by a senior decision maker. This will ensure timely integration with the ED patient journey and the early initiation of clinical management plans.

The activities occurring during the initial stages of ED care can vary from patient to patient , from in- hours to out-of-

hours and from one ED to another. However they typically require a patient to wait in a queue. The time required to complete these activities contribute to time to triage, time to initiation of treatment, time to referral to speciality services and total length of stay in ED.

Although this model is primarily aimed at larger EDs who are at least moderately well evolved in terms of models of care and have appropriate availability of senior medical staff to support the model; the principles of senior assessment at or following triage, and streaming, are aspects that can be incorporated into smaller ED functioning.

This model does not replace the responsibility of the whole of hospital to manage capacity and demand and eliminate access block. The ED SAS focus is on EDs improving the efficiency with which they manage patients that present to ED, removing unnecessary waits in the ED for patients and decreasing total ED length of stay, whilst maintaining high quality clinical outcomes.

During the trial of the ED SAS model at Westmead Hospital, a comparison was made between patients attended to with standard ED processes (control group) and patients who were attended using this model of care (intervention group). The following data was demonstrated (see Appendix 1 for further detail):

- A median difference of 79 minutes for "Time to medical Intervention" in all triage categories for the ED SAS group
- A median difference of 116 minutes for "Time to medical Intervention – Triage Category 3" for the ED SAS group
- A median difference of 136 minutes for "Time to disposition" in all triage categories for the ED SAS group.

No one solution for front end processes is likely to be the optimal answer to enhance the ED patient journey. However the ED SAS model of care, using the principles of lean thinking and system analysis, is a combination of potential high impact strategies aimed to eliminate redundant steps in ED front end processes.

Currently, patients may be assessed late in the ED journey by a senior medical officer which delays decision making and disposition. This streamlined approach facilitates earlier clinical decision making and streaming of patients to appropriate care areas with improved clinical outcomes,

patient experience and coordination of patient flow to disposition.

Anticipated outcomes from ED SAS :

1. Quality outcomes
  - a. Reduced time to antibiotics/pain relief/symptom management
  - b. Early risk stratification
  - c. Improved appropriateness of diagnostic test ordering
2. Patient and carer experience
  - a. Increased patient satisfaction
  - b. Minimising wait times
  - c. Improved communication with patients on plan of care
3. Patient flow/ systems outcomes
  - a. Decrease in "did not waits"
  - b. Decrease in total length of stay for patients admitted and discharged home from ED
  - c. Early identification of patients appropriate for management in models of care outside ED – therefore ensuring patients are treated in the most appropriate setting.

## SECTION 3

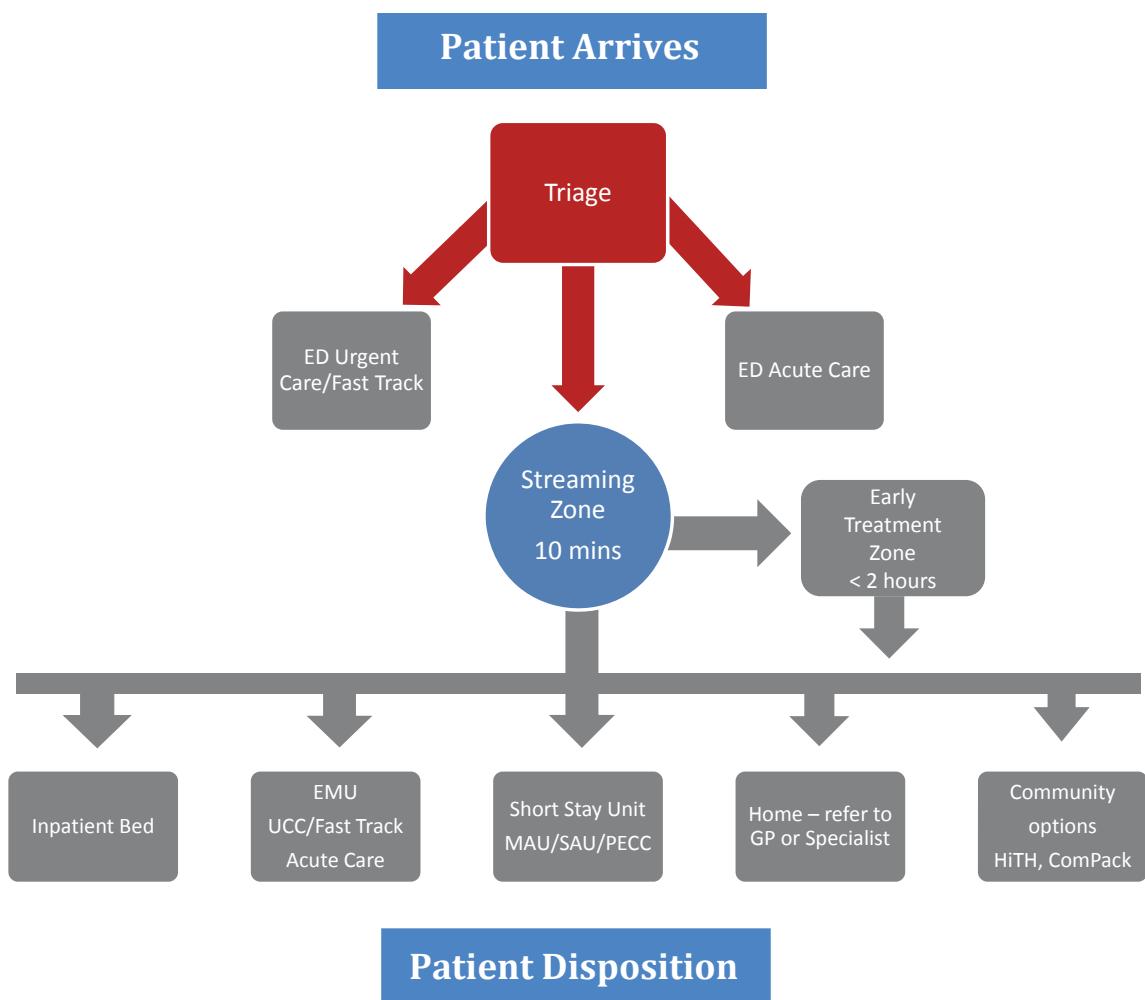
# Design of the ED Senior Assessment and Streaming Model of Care

The ED SAS model of care is outlined below (Figure 4). The process begins when the patient arrives in ED and ends when the patient has a disposition option.

The concept of a dynamic zone which filters access to the ED and amalgamates multiple streaming processes underpin this model of care. This model aims to avoid queuing for any streaming zone. There is need for flexibility of available bed capacity. Triage categories 2-5 are suitable to be

managed through this model. Ideally, the ED should have capacity to manage Triage 2 patients through standard ED processes. Triage 3-5 patients can be managed through ED SAS. This includes early risk stratification, early clinical management plan development and appropriate use of bed spaces within ED.

Figure 4 – ED SAS model of care



## **3.1 Early ED Senior Assessment and Streaming Model of Care Process**

### **3.1.1 Quick Triage and Registration**

Triage assessment should be limited to 5 minutes to establish the patient's level of urgency only. Triage assessment is thus limited to essential details surrounding the presenting problem rather than collecting complete patient histories. The triage nurse may still stream patients as per usual ED processes. For example minor injuries streamed straight to Fast track or Urgent Care from triage without going through the Streaming Zone. Interventions at Triage are limited to first aid only. This limits queuing at the front of the ED by reducing blockages. A more detailed assessment will then be undertaken once the patient goes to Urgent Care Centre/Fast Track the Acute Care area or the Streaming Zone.

Quick registration by a clerical officer co-located with the triage nurse is an essential element of this process. Clerical processes should not be a barrier to patient care. Full registration of patients can be completed by clerical staff at the bedside.

### **3.1.2 Streaming Zone**

The key aspects of this zone are assessment and early decision making by a senior ED medical officer, preferably an ED Staff Specialist, senior ED Registrar or senior ED Career Medical Officer. Selection of senior ED medical staff in this role is an important aspect in ensuring timely disposition decisions are made at the beginning of the ED patient journey. The Streaming Zone is patient focused with early clinical decision making and early streaming of patients to appropriate care areas within or outside of the ED. Streaming by the senior medical officer takes place immediately following triage and should ensure judicious use of available resources, including workforce and beds.

This is not a standalone model of care. It requires the integration of patient flow systems to support and sustain it. Such systems include models of care within ED (e.g. Fast Track) and the suite of services provided by ED (e.g. Urgent Care Centre and Emergency Medical Units) as well as the streaming options outside of the ED (e.g. available beds in inpatient units, Medical and Surgical Assessment Units, Psychiatric Emergency Care Centre or inpatient unit, Hospital in the Home services and Outpatients).

Within the Streaming Zone, the patient is assessed by the senior medical officer and a clinical management plan is documented. Within this zone the patient may also have IV access established and pathology ordered and taken. Imaging or other testing may be ordered and the initial interaction with inpatient teams may be performed within this zone. The entire patient encounter should be limited to 10 minutes. The patient is then streamed to the appropriate clinical area with their initial clinical management plan e.g. Early Treatment Zone, Short Stay Unit, admission into hospital inpatient unit, fast track or back into the waiting room if there are no appropriate other options.

If the patient's symptoms are well defined, it will be easier to provide a definitive management plan and disposition decision (particularly if the ED uses clinical pathways or similar). If the patient's symptoms are not well defined, the streaming zone process is also important as an initial management plan and investigations can be ordered, with further review of the patient completed as per normal ED process.

### **3.1.3 Early Treatment Zone - ETZ**

The implementation of an ETZ is one streaming option that can be used following assessment in the Streaming Zone, not all patients need to go through ETZ. It should be a multi-functional and flexible clinical area that may be utilised in any of the following ways:

- A clinical area where the patient management plan from the streaming zone can be implemented and completed with the patient then discharged within 2 hours.
- a clinical area where the patient management plan can be commenced prior to the patient moving to another area in ED e.g. into the acute area.
- an internal waiting area for patients still requiring observation prior to discharge or waiting for results of tests such as pathology
- the promotion of unidirectional flow through the ED – following assessment in the Streaming Zone, patients can have the initial treatment completed in ETZ rather than going back to the waiting room to await commencement of treatment. This process also helps patients feel they have progressed in the queue.
- An area where inpatient teams may assess ED patients. This is particularly useful for ambulant patients that do not need to take up ED beds simply for the purpose of a quick assessment prior to admission, thereby preserving ED bed capacity. It should be noted that this area should

- be utilised in lieu of inpatient unit beds or other hospital locations for admitting patients who do not require the services of the ED.
- A buffer to maintain ED acute area bed capacity.

Ongoing reassessment of the patient following initiation of treatment in the ETZ also enables early recognition of the deteriorating patient. Patients who require intensive nursing care such as the confused elderly patient are not suitable for the ETZ. The total LOS of patients within the ETZ should be ideally limited to <2 hours with the patient then moving to another area of the ED for continuation of their treatment (e.g. acute care area or EMU), an inpatient ward area, or the waiting room to await finalisation of their care (e.g. follow up appointments, discharge letters or admission). Further disposition planning and standardised safe clinical handover procedures are imperative to ensure the transfer of professional accountability and responsibility to the person caring for the patient as they transition to the next care area.

### **3.1.4 How to avoid patients queuing for the Streaming Zone**

As each ED is unique in terms of staffing, physical layout and mix of patient presentations, allocation of patients to acute beds and understanding your ED capacity at various times is required. This is to avoid creation of queues in the acute area of the ED and particularly the Streaming Zone.

The pilot and subsequent implementation of this model at Westmead Hospital refers to this concept as understanding "functional bed capacity". This concept is detailed here as one option EDs may choose to use to guide evaluation and availability of bed capacity

A basic formula which can be used for this purpose is as follows:

**Functional bed capacity = Total ED beds(not resus) – no. of patients waiting to be seen inside the ED**

Eg 6 acute beds available but 3 patients still waiting to be seen by doctor = functional bed capacity of 3

A minimum number of functional beds need to be available to prevent queing. Westmead uses the number 4 as the determination of functional bed capacity to guide patient bed allocation with the following principles:

- If there is no patient in the streaming zone, then the next Triage category 3/4/5 patient will go straight to streaming zone regardless of the functional bed capacity.
- If there are patients in the streaming zone, the formula should guide where the next acute patient goes:
  - Where the functional bed capacity is 4 or greater, each patient will go directly to acute
  - When the functional bed capacity is <4, the next patient should go to the streaming zone.

Scenario examples using the functional bed capacity formula

1. No available beds in acute ED = all patients except Triage category 1 go through the streaming zone
2. Functional bed capacity <4 = only Triage category 2 patients go directly through to acute beds
3. Functional bed capacity ≥4 or Triage category 3/4/5 patients go directly through to acute if streaming zone is occupied. Patients continue to do so until the functional bed capacity reaches <4.

Clinical judgement should be utilised especially with regards to keeping inappropriate patients away from the acute area

Regular communication between the streaming coordinator, ED NUM/nurse in charge and the senior Medical officer is essential for this process.

### **3.1.5 Patient journey after streaming/early treatment zones**

Key principles from lean thinking are applied to patient flow in this model, including elimination of duplicated work, minimising queuing and focusing on processes that add value to the patient journey. The senior medical officer will communicate directly with the inpatient teams as required, minimising the number of steps in the patient's management. The patient journey after streaming/ early treatment involves enacting the patient management plan, as instigated and documented by the senior decision maker.

The addition of a junior medical officer to work with the senior medical officer is a recommended option for this model of care. The junior medical officer can work between the Streaming Zone and the Early Treatment Zone assisting the senior medical officer with tasks such as test ordering, responding to inpatient team call backs, following up on patient's progress in the ETZ, electronic

medical documentation or completing discharge summaries. The junior medical officer is also given the opportunity to work alongside and observe a senior ED Doctor completing focused patient assessments and making clinical decisions in a time sensitive environment.

### 3.1.6 Clinical Handover of the Patient

Effective clinical handover processes are essential to ensure this model of care does not disrupt safe clinical handover of patients between areas of the ED and from ED to other hospital units. Patients who are seen in the Streaming Zone should not be assumed to have been "seen by" a medical officer. ED SAS will streamline the usual ED medical assessment and management of patients; however each patient must still have the required medical assessment and management.

The implementation of this model at Westmead Hospital used the following principles to ensure safe clinical handover:

- Use of the "S" set event in FirstNet to indicate the patient has been seen through the Streaming Zone, however still waiting full medical assessment (doctor exam icon in FirstNet still remains).
- Use of the Streaming Zone power form in FirstNet to indicate the outcome of the assessment by the senior medical officer and if investigations had been ordered, whether these investigations had been completed in the Streaming Zone and a free text area for additional clinical information required in the handover of the patient to other ED staff.
- Senior medical staff (from the Streaming Zone) handover to inpatient teams when the patient is being streamed directly to an inpatient ward.
- Senior doctor to senior doctor verbal handover of unwell patients seen through the Streaming Zone.
- Standard nursing handover processes were adhered to by nursing staff

## 3.2 Advantages of the Streaming Zone and Early Treatment Zone approach

- Reduced triage times – the Triage nurse can focus on quick assessment and assigning level of urgency rather than taking a detailed history and initiating investigations.
- Early senior medical assessment and decision making with treatment plan following triage. This is limited to 10 minutes prior to the patient moving to the next part of their ED journey
- Designated treatment space in the ETZ for simultaneous procedures and early initiation of appropriate investigations
- Reduced time to appropriate treatment e.g. antibiotics and analgesia and reduced total ED time.
- Application of relevant clinical pathways e.g. chest pain, sepsis
- Bedside clerical registration removing the bottleneck at Triage
- Flexible flow of patients between the waiting room, Streaming Zone and ETZ.
- Development of a definitive patient management plan in the Streaming Zone improves the patient's whole ED journey and will have a flow on effect for the entire ED and hospital.
- Improved ED processes reduces the need for internal escalation processes and "crisis management"
- More meaningful and detailed risk stratification of patients from the time of arrival in the ED.
- Improves the patient experience through improved communication.
- Early streaming of patients to appropriate care areas outside of the ED

Data collected during the pilot and subsequent implementation of the ED SAS model of care at Westmead Hospital Emergency Department can be found in Appendix 1

## SECTION 4

# Operational Arrangements

### 4.1 Hours of operation

The ED SAS model of care operating hours should reflect the volume and pattern of patient presentations. NSW Ministry of Health data indicates that arrival patterns of ED patients with triage category 3, 4 and 5, peak between 9:00am-9:00pm Tuesday-Friday and 9:00am-10:00pm Saturday to Monday.

Therefore it is essential that the ED SAS model operating hours include a large portion of after-hours activity. The implementation of the ED SAS model should reflect local needs.

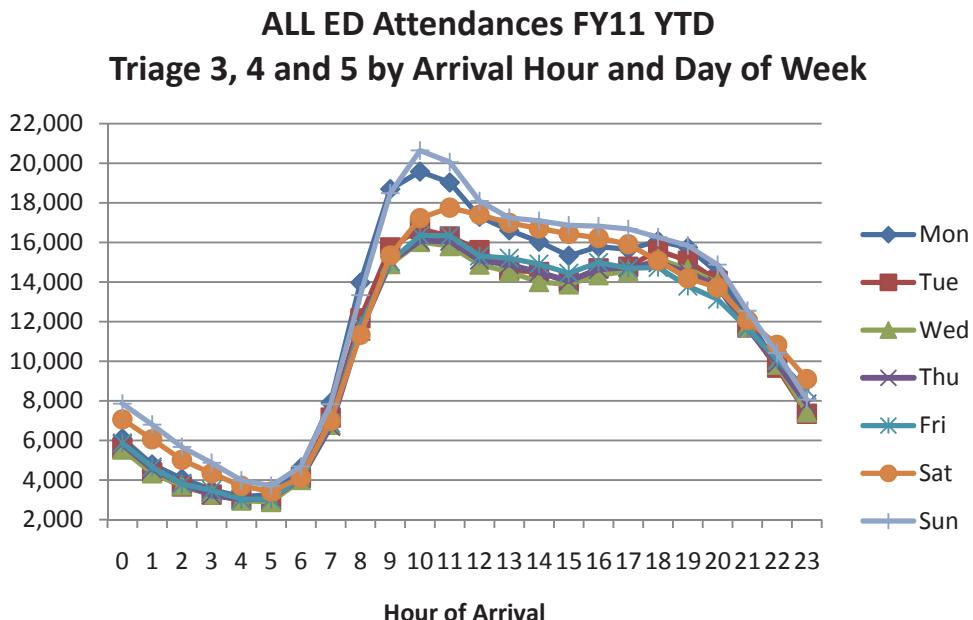
The hours of operation implemented at Westmead Hospital ED during the pilot of this model were 8-10 hours per day, 7 days a week. Generally the model at Westmead was run in two segments – mid morning until lunch time, followed by a second session in the afternoon until early evening to account for peaks in presentations. A late evening session from 1830-2100hrs has been added to synchronise with patient demand.

### 4.2 Staff requirements

This model of care depends on a cohesive team driven by strong leadership with flexible, critical thinking and goal-directed team members. An appropriate staff skill mix with adequate senior medical staffing is integral to the ability of the ED SAS model of care to provide the right service to meet patient demand, specifically skills such as clinical decision making, critical thinking and knowledge of patient flow systems.

This model of care may not be dependant on additional staffing resources as the model is focused on efficient use of existing ED resources,. The ED SAS implementation toolkit details the process for assessing staffing requirements to implement ED SAS; application for increased staff numbers, if required is to be managed through usual Local Health District processes. Implementation of the recommendations of the NSW Health ED Workforce Analysis tool should have been undertaken to inform ED staffing and skill mix requirements. Reallocation of staffing resources within the ED is a key component of this model. Local implementation

Figure 5 – Source NSW Ministry of Health, Health Information Exchange extracted 28th June 2011



will require identification of areas within the ED where there are multiple steps or duplication of tasks leading to underutilisation of staff, or where highly skilled senior staff are required to perform low skill tasks that may be devolved elsewhere. It is important that ED staff undertaking the implementation of this model understand that, where they are able to, realigning staff roles and tasks and rosters is possible and of value to the ED and patients.

Efficiencies gained by early senior decision making and clinical management plan implementation has been demonstrated to result in efficient process for the entire ED and patient journey. For example there is more efficient utilisation of ED staff specialists at the ‘back of house’ due to their early involvement in the assessment and clinical management of patients initially.

#### 4.2.1 Medical team

A medical senior decision maker is imperative to this model of care to maintain patient flow and ensure patient safety. This is reliant on the medical officer’s ability to make high quality quick clinical decisions about the patient’s need for emergency care, admission, suitability for streaming options and patient’s readiness for discharge on completion of treatment in the ETZ. Hence the medical staffing mix should include an ED Staff Specialist (alternatively senior ED Registrar or senior Career Medical Officer).

As mentioned, a junior medical officer ideally supports this role, but should not be left to manage it alone. Exposure to a senior expert who is providing quick focused patient assessment, development of clinical management plans and disposition decisions is a unique opportunity for the junior medical officer. It provides an additional learning environment to see firsthand how an expert ED clinician approaches the undifferentiated patients

Domain	Specific Role	Do in this role	Don't do in this role
Medical	<b>Streaming Zone</b>  In Charge (I/C) ED Staff Specialist preferred. Can be Senior Registrar or Senior ED CMO	Overall clinical, process and flow governance of model of care	Conduct procedures likely to take more time than prescribed 15 minutes
		Quick assessment and early streaming of patients - 10 minutes	Detailed clinical history, examination and documentation
		Risk stratification of patients to high, intermediate and low risk (eg ACS, sepsis)	Delay decision making as it will cause major disruptions to flow in ED
		Appropriate disposition decisions	
		Decision regarding early interventions (analgesia, antibiotics)	
		Risk stratification of patients to acute beds or waiting room	
		Supervising/guiding clinical guideline usage	
		Ensure smooth flow of patients in collaboration with Streaming Coordinator	
		Document short impression/plan/progress	
		Communicate plan to relevant staff including expected patient journey	
Assistant Medical Officer	Junior Registrar/CMO/RMO	Conduct/ order investigations as requested by Streaming Zone I/C	Conduct/order investigations beyond requested by I/C without prior notification
		Documentation – clinical notes, plans, referrals, discharge summaries, GP/Family discussions	Delay management decisions by not communicating with I/C regarding constraints
		Review – case progress, x-ray/pathology results, specialist reviews	Conduct detailed medical assessments unless indicated by I/C to do so
		Communicate – progress of cases with I/C, inpatient specialty teams, radiology	
		Handover – handover cases being transferred from Streaming Zone/ETZ to respective clinical teams e.g. acute ED team, inpatient specialist team	

#### 4.2.2 Nursing team

As discussed, Quick Triage is an important aspect of this model. Having senior medical assessment immediately following triage enables the triage nurse to focus on establishing the patient's level of urgency rather than a complete assessment.

Access block, the triage nurse's role, patient age, and ED processes are well known to negatively impact on the effective performance of the triage nurse<sup>1</sup>. The triage nurse will modify their practice behaviours to best meet the increasing needs of their patients (e.g. analgesia and test ordering). This is often done in order to avoid scrutiny if an adverse event occurs or aggression at triage from patients waiting for extended periods of time.

Many EDs utilise a second triage nurse as the triage process often takes longer than the recommended 3-5 minutes. Additional patients arriving during this period means the triage nurse is unable to see them in a timely manner and thus a second triage nurse is required. The ED SAS model of care allows the triage nurse to focus on quick assessment and allocation of Triage category, feeling safe in the knowledge that the patient will be assessed by a senior medical officer within the time frame designated by the assigned triage category. Greater volumes of patients can then be triaged by the one triage nurse.

There will always be times when short peaks in activity require additional triage nurses to assist with "working the queue" however these peaks do not usually occur for extended periods of time. Reallocation of the established second triage nurse to Streaming Coordinator, as occurred at Westmead Hospital is an example of realigning current roles to capitalise on the impact of implementing ED SAS.

The Nurse Streaming Zone coordinator is an integral part of the flow of the ED SAS model of care and has overall process and patient flow governance. Specifically this will involve coordination of care through the front end processes and effective and timely communication throughout the ED. Tracking the progress of patient's care is also a large component of this role. This involves initiation of actions to address delays in the flow of patients.

The Clinical Initiatives Nurse (CIN) position is also well suited to the ETZ nurse position. ED SAS discourages backwards flow of patients to the waiting room following triage. The CIN position may be realigned and the skills of the CIN can be utilised in an area such as the ETZ. Similar models of care have utilised the CIN as a part of the EDSAS team such as the "Immediate Initiation of Care" model developed at Prince of Wales Hospital ED

<sup>2</sup> Knapman, M & Bonner, A Overcrowding in medium-volume emergency departments: Effects of aged patients in emergency departments on wait times for non-emergent triage-level patients International Journal of Nursing Practice\_2010; 16: 310-317

<b>Domain</b>	<b>Specific Role</b>	<b>Do in this role</b>	<b>Don't do in this role</b>
<b>Nursing</b>	<b>Triage Nurse</b>	Determine chief complaint/ presenting problem and thus patient priority.	Collect complete patient histories and record routine vital signs at triage
		Establish patient acuity by assigning a triage category	Create bottle necks with patients queuing to be assessed by the triage nurse
		Allocate Triage Category 3, 4 & 5 to Streaming Zone	Obtain patient information which will be collected minutes later by the Streaming team
		Limit Triage assessment to 5 minutes	Ask routine assessment information such as allergies and lists of medication
		Ensure speedy placement of patient into appropriate care area	
		Communicate in a personable and professional manner with patients and carers regarding ED processes.	
		Maintain overall oversight/general management of the Streaming Zone & front end operational processes in collaboration with Streaming Zone I/C	Get involved in patient flow activities associated with acute care i.e. disposition from acute care
<b>Streaming Coordinator</b>	Should be a Senior ED nurse capable of making patient flow decisions and negotiate with entire ED	Communicate in a personable and professional manner and negotiate for desired outcomes	Get involved in individual patient care
		Ensure Streaming team maintain agreed timeframes - 5 minute triage - 10 minute Streaming Zone - 2 hours in ETZ	
		Monitor Ambulance Off Stretcher Time	
		Facilitate patient flow & the referral of patients to suitable services following assessment, which may be external to the ED (eg MAU)	
		Maintain electronic tracking of patients (eg FirstNet)	
		Track patients in the Streaming Zone and waiting room who are awaiting placement in ED, waiting for specialty team review or awaiting admission under the care of an inpatient team.	
		Monitor, report & resolve bottle-necks in flow	
		Support Streaming team in times of high activity	
		Escalate changes in patient's condition through regular rounds of streaming areas & waiting room	
		Liaise with key ED roles: - Triage nurse - Streaming Medical I/C - ED clinical team	

Domain	Specific Role	Do in this role	Don't do in this role
Nursing	<b>Streaming Zone Nurse</b>  Enrolled nurse or Junior ED Nurse	Work collaboratively with the ED team to reduce unnecessary repetition of assessment and diagnostics for patients.	Duplicate patient information that has already been obtained by the Streaming Medical team
		Perform initial assessment in collaboration with the Streaming I/C. This may include but is not limited to the recording of vital signs, ECG, spirometry	Complete nursing documentation
		Perform investigations/ interventions as outlined by the Streaming I/C assessment i.e. venepuncture, cannulation, point of care testing, These procedures/ interventions must take no longer than 10 minutes. Recognise procedures outside of this timeframe & handover to ETZ nurse.	Carry out nursing procedures that will delay patient flow through Streaming Zone
		Establish and maintain communication pathways with key stakeholders in the Streaming Zone including the triage nurse, Streaming medical team, Streaming Coordinator and the ETZ nursing staff	
		Communication with patients and carers regarding ED processes	
	<b>Early Treatment Zone Nurse</b>  Experienced ED nurse at the level of Clinical Initiatives Nurse and able to implement local CIN protocols	Document the patient's vital signs, Implement the patient treatment plan documented by the Streaming I/C . Typically this involves symptom management (analgesia), undress patient, initiating investigations obtain ECG etc and documented treatment modalities i.e. antibiotic therapy, splinting and analgesia together with focused patient observation and patient communication	Move patients out of the ETZ without completing the relevant nursing documentation and clinical handover.
		Ongoing review of patients to detect changes in clinical urgency and reassess the treatment initiated.	Get involved in lengthy nursing procedures, particularly during times of peak activity.
		Escalate concerns immediately to the Streaming I/C when indicated	
		Complete all relevant nursing documentation	
		Maintain length of stay of less than 2 hours	
		Prioritise patient management and initiate CIN protocols in accordance with local guidelines and policy. Assessment and management of patient's pain is a key priority	
		Hand over patient care to the appropriate caregiver when the patient is transferred out of the ETZ	
		Utilise a team approach to facilitate patient flow and reduce repetition in patient care	
		Establish and maintain communication pathways with ED key stakeholders	
		Ensure patients receive appropriate discharge/transfer of care information e.g letters for GP or specialist, information about follow up appointments	
		Frequent communication with patients and carers	

#### 4.2.3 Clerical team

Clerical staff play a vital role in efficient processing of patients. Provision of flexible clerical processes such as co location with triage nurse and bedside registration facilitates smooth and rapid movement of patients through the model of care.

Domain	Specific Role	Do in this role	Don't do in this role
Allied Services	Clerical Staff	Facilitate quick registration of patients with triage nurse	Create bottlenecks at Triage with clerical processing
		Complete full registration for patients sent to Streaming Zone	

#### 4.2.4 Technical assistants

A technical assistant to perform specific tasks such as venepuncture, IV cannulation, performing ECGs, applying splints including plaster, and data entry may be an additional position that improves the flow of patients through the ED SAS model.

## SECTION 5

# Resources

### 5.1 Physical space required to implement ED SAS

Additional space or redesign of existing space in the ED will be required to accommodate this model of care. The ED SAS implementation toolkit provides further detail on assessing the physical space required. A business case may be required to communicate the infrastructure changes required. A guide to doing this is also detailed in the ED SAS implementation toolkit.

The following clinical areas are required:

- A clinical area for the Streaming Zone which is equipped with an examination trolley and a reclining treatment chair together with basic assessment equipment.
- An area for the Early Treatment Zone which is located in an approved clinical space containing a combination of examination trolleys and reclining treatment chairs, equipment for commencing treatment and staff station.

To optimise clinical space and patient flow these zones are best located directly behind triage.

### 5.2 Clinical Equipment

Clinical equipment required in the ED SAS location may include the following:

- Access to emergency trolley , basic airway, emergency drugs and administration equipment
- basic spirometry
- Blood Glucose monitoring machine
- dressing and wound care equipment
- consider portable nitrous oxide
- ophthalmoscopes and otoscopes
- oxygen supply and masks
- suction unit and suction catheter and devices
- pharmacy cupboard and fridge
- plastering equipment and splinting/ supportive bandages
- procedure trolleys and examination lights
- recliner chairs in the treatment area
- slit lamp for assessing minor eye injuries/visual acuity

chart, device to measure Intra-ocular pressure

- trolley or bench in each examination area
- vital signs monitor with pulse oximeter
- wheelchairs.

Some basic pharmaceuticals may also be stored in the ED SAS location. Suggestions include the following:

- a range of oral, IM and IV analgesia
- antibiotics, oral and IV
- immunisations such as ADT/immunoglobulin
- local anaesthetic
- asthma medications/ spacer devices/ nebuliser equipment
- consider access to S4/S8 Drug cupboard

### 5.3 Other Clinical Considerations e.g Clinical Pathways

Clinical pathways and decision making tools may assist staff in implementing the ED SAS model of care. Protocols for nurse initiated medications, ordering of imaging studies and diagnostic investigations as well as initial management for disease specific states may assist with providing standardised, quality clinical care which will increase throughput. Examples include:

- Clinical Initiatives Nurse protocols
- Clinical toolkits
- Clinical pathways e.g. chest pain, asthma and sepsis
- Protocols for the rational ordering of pathology and radiology

## SECTION 6

# Communication and Support Services required for ED SAS

The ED SAS model of care requires engagement with speciality teams and services within the hospital to ensure understanding of the model of care. Information should include the cohort of patients being assessed and managed through ED SAS with the formulation of patient clinical management plans close to the triage process. This model also requires support from the Hospital Executive Team.

This information is important as it is a significant deviation from the usual process of the patient journey in ED. For example the following differences will be encountered.

- Patients being streamed directly from ED Streaming zone to wards or the outpatient department
- The need for early access to inpatient consults whilst patients are in the ETZ to enable discharge

Consideration should be given to establishing arrangements with external service providers to address the needs of patients requiring services after the ED SAS process. The ED SAS Implementation toolkit provides further information on this process.

Communication strategies should also be developed to ensure patients and their carers are informed of the new model of care and how the patient's Emergency Department journey may now be different. For example pamphlets or information sheets that can be distributed to patients.

Paramount to efficient operation of the ED SAS model of care is targeted communication between staff. The rapid nature of assessment and treatment in ED SAS (which will run in parallel to traditional ED processes) can be challenging and requires effective communication between all staff.

Until the new model of care is embedded in usual practice, education and regular review of the principles and functioning of the model is required. In the initial implementation phase, this level of communication may be required at the beginning of each shift to ensure all staff are aligned with the outcomes of the ED SAS model of care.

All services that will ultimately be involved in facilitating ED Senior Assessment and Streaming should be engaged. Examples include:

- Allied Health Services
- Inpatient specialty teams including those linked to supporting models of care such as MAU, SAU
- Medical specialty teams
- Patient Flow managers
- Community services
- Public outpatient areas
- Radiology and pathology services
- Hospital executive team

## 6.1 Connecting patients to their GPs

As with all Emergency Department patients, where the patient has a GP, they should be involved in arranging all aftercare, so that the GP remains the primary physician coordinating the patient's overall care.

All patients treated in the ED SAS model of care should have information provided to their GP to ensure ongoing management of their condition in the community as appropriate. This should include a treatment summary or referral letter for their usual GP.

Some methods that can be used to update a patient's medical record and facilitate the flow of information from ED to GPs, are as follows:

- A transfer letter or plan can be electronically sent/posted/faxed to the GP or hand-delivered by the patient at their next GP appointment. This is currently the method used by EDs in NSW.
- An encrypted email to the GPs practice.

## SECTION 7

# Information Systems and Communication

## 7.1 Information and communications technology

Information and communication systems are essential for the efficient operation of the ED SAS model of care and also provide a basis for performance evaluation.

### 7.1.1 Information systems

Information systems and support in the ED SAS model of care must be structured according to NSW Department of Health Information Systems policy. These systems should allow collection of a minimum dataset for tracking patients and activity, and for collecting appropriate data to monitor the effectiveness and outcomes of this model of care.

FirstNet should be reconfigured to allow computerised tracking of individual patients within the Streaming Zone, ETZ and disposition streaming options. Additionally an "S" icon is available via set events in FirstNet to identify patients who have been processed through the Streaming Zone.

As discussed in section 3.1.6 Clinical Handover of the Patient, a Streaming Zone power form for FirstNet has been developed and is in use at Westmead Hospital. A paper form of this document can be found in Appendix 2. The Streaming Zone power form has been submitted to the FirstNet Application Advisory Group as a change request and is awaiting approval.

### 7.1.2 Communication systems

Mobile communication systems such as phone, computer tablets and Computers on Wheels (COWs) are necessary to allow both oral and written communication between ED clerical, nursing and medical staff, inpatient teams, support services, patient flow units and stakeholders.

## SECTION 8

# Governance

### **8.1 Clinical governance**

Clinical governance and operational management of the ED SAS model of care remains with the Emergency Department medical, nursing, and clerical managers as with other ED functions.

Review of the functioning of the ED SAS model of care should be included in usual ED review pathways such as educational case review and multidisciplinary morbidity and mortality meetings.

### **8.2 Incident management**

All incidents occurring within the ED SAS model of care should be managed through usual incident management channels including reporting via the Incident Information Management System (IIMS).

# Evaluation of the 'Early ED Senior Assessment and Streaming Model of Care Trial'

This model of care, titled SAFE-T (Senior assessment and streaming with further evaluation following triage) was conducted at Westmead Hospital Emergency Department. It was run at different times of the day on four occasions with involvement of an ED staff specialist, ED Registrar, experienced ED Nurses and clerical staff. During the trial period, two beds in ED were designated as early assessment beds and four beds were designated for early treatment in previously unoccupied areas of the ED.

The trials was run on four occasions with different staff

specialists for three to four hours at each session and data for the patients being triaged during the time were collected. A randomly generated control group was used from patients presenting during the same month, same weekday on a different week from the trial period.

The following is 2 week pilot data collected during the evolution of the model at Westmead ED. Mann-Whitney U test was run on the two groups of patients and a brief summary of the results is given in the table below.

Characteristic	Control group	Intervention group	Comments
<b>Eligible patients – ATS categories 3, 4 and 5</b>	67	90	More patients reviewed in same bandwidth during trial period.
<b>Time to medical intervention - irrespective of ATS categories</b>	119 minutes (95% CI 60 – 182)	22 minutes (95% CI 17 – 37)	Median difference of 79 minutes (95% CI 41 – 117). Two sided p<0.0001
<b>Time to disposition - irrespective of ATS categories</b>	451 minutes (95% CI 371 – 533)	324 minutes (95%CI 276 – 410)	Median difference of 136 minutes (95% CI 61 – 211). Two sided p=0.0003
<b>Time to offload from ambulance stretcher – all ATS categories</b>	22 minutes (95% CI 4 – 56) n=22 patients	31 minutes (95% CI 3 – 82) n=12 patients	Median difference (-)7 minutes two sided p = 0.53
<b>Time to medical intervention – ATS category 3</b>	154.5 minutes (95%CI 27 – 251) n=34 patients	18 minutes (95% CI 16 – 29) n=43 patients	Median difference of 116 minutes (95% CI 24 – 185) Two sided p<0.0001
<b>Time to disposition – ATS category 3</b>	557.5 minutes (95%CI 484 – 914) n=34 patients	410 minutes (95% CI 315 – 456) n=43 patients	Median difference of 237.5 minutes (95% CI 107 – 401) Two sided p<0.0001
<b>Time to medical intervention – ATS category 4</b>	72 minutes (95% CI 37 – 128) n=25 patients	32 minutes (95%CI 17 – 49) n=35 patients	Median difference of 37 minutes (95% CI 12 -79) Two sided p=0.0015
<b>Time to disposition – ATS category 4</b>	342 minutes (95%CI 222 – 395) n=25 patients	276 minutes (95%CI 222-403) n=35 patients	Median difference of 19 minutes (95%CI -70 – 119) Two sided p=0.66
<b>Time to medical intervention – ATS category 5</b>	180.5minutes (95%CI 119 – 229) n=8 patients	27 minutes (95%CI 4 – 75) n=12 patients	Median difference of 124.5 minutes (95%CI 63 – 185) Two sided p=0.0003
<b>Time to disposition – ATS category 5</b>	413 minutes (95%CI 295 – 547) n=8 patients	124minutes (95%CI 67 – 337) n=12 patients	Median difference of 232 minutes (95%CI 64 – 390) Two sided p=0.01

Time to offload from ambulance stretcher is demonstrated in this data to be longer during SAFE-T. This is a reflection of challenges with communication about patients arriving by ambulance and whether they were suitable for the SAFE-T model of care.

Further data shown below has been collected on over 10,000 patients since the implementation of the SAFE-T model at Westmead ED and compares LOS for patients during 2011 vs corresponding 2010 data. This includes patients seen during SAFE-T and when usual ED processes were in place. The use of the SAFE-T model of care

significantly reduced time to medical intervention and disposition (discharge or admission from ED – time of departure from ED). ATS category 3 and 5 patients received the greatest benefit from this intervention and early decision making led to significantly shorter ED length of stays.

Although ED overcrowding and access block requires a whole of hospital approach to reducing delays, there is evidence here the SAFE-T model and the ED SAS which was modelled on this can impact on ED process and length of stay which may assist in improved patient satisfaction.

During SAFE-T hours		95% CI for % decrease in LOS		
ATS	% decrease in LOS	LC	UC	p-value
1	22.3	-4.9	42.4	0.099
2	6.3	0.2	11.9	0.043
3	17.9	13.4	22.2	0.000
4	17	12.2	21.5	0.000
5	8.8	-0.5	17.2	0.062

Out of SAFE-T hours		95% CI for % decrease in LOS		
ATS	% decrease in LOS	LC	UC	p-value
1	2.2	-22.5	25.5	0.875
2	7.4	1.4	13	0.017
3	10.2	5.2	14.8	0.000
4	6.5	1.6	11.1	0.009
5	4.8	-4	12.9	0.271

All patients		95% CI for % decrease in LOS		
ATS	% decrease in LOS	LC	UC	p-value
1	12	-7.3	27.8	0.205
2	6.6	2.4	10.7	0.002
3	14.3	11	17.5	0.001
4	11.8	8.4	15	0.001
5	6.4	0.1	12.3	0.048

Data for 10,000 patients in the 3 months following implementation of SAFE-T<sup>3</sup>

<sup>3</sup> Shetty, A., Gunja, N., Byth, K. and Vukasovic, M. (2012), Senior Streaming Assessment Further Evaluation after Triage zone: A novel model of care encompassing various emergency department throughput measures. Emergency Medicine Australasia. doi: 10.1111/j.1742-6723.2012.01550.x

## APPENDIX 2

# Streaming Zone Documentation Sample

Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Patient Information:

Time \_\_\_\_\_

### **Presenting problem/s**

---

---

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---

### **Investigations required**

- 1.
- 2.
- 3.
- 4.

### **Management plan**

---

---

---

**Transfer to** (Please circle) ETA   AWR   FTWR   HOME   WARD\_\_\_\_\_

### **Handover of main issues and problems**

- 1.
- 2.
- 3.

# Early Treatment Zone Documentation Sample

Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Time: \_\_\_\_\_

Patient Information:

## **Presenting problem/s**

---

---

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## **Reason for transfer to the ETZ**

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## **Observations on arrival to the ETZ**

Temp: \_\_\_\_\_ HR: \_\_\_\_\_ BP: \_\_\_\_\_ RR: \_\_\_\_\_ Sats: \_\_\_\_\_ GCS: \_\_\_\_\_

### **Transfer to:**

Acute ED    FastTrack    HOME    WARD

Time: \_\_\_\_\_

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### **Further**

# Foreword Emergency Department Senior Assessment and Streaming Implementation Toolkit

## ***Why do we need an ED Senior Assessment Streaming model?***

Every day across NSW, we see and treat a large and growing number of patients in our Emergency Departments (ED). This growing demand can lead to blockages in transferring care of patients to an inpatient unit and delays to assess patients and determine disposition plans. This can put patients at risk as well as increase the workload for staff who have to manage patients in a busy waiting room. The National Health Reform Agreement on Improving Public Hospital Services includes the National Emergency Access Target (NEAT) to improve ED services. This requires ED patients to be admitted, referred for treatment or discharge within four hours.

Creating an Early ED SAS model of care will help us provide an appropriate service for ED patients, facilitating a timely assessment and treatment plan to reduce their overall length of stay in the ED.

## ***The goal***

The successful roll-out of Early ED SAS across NSW is an integral part of the long-term strategy to improve access to timely and appropriate emergency care, and to reduce unnecessary time that patients spend in our EDs. The next 12 months are an exciting time in health as we move towards achieving national reform, and see both physical and philosophical changes to the landscape of emergency care.

## ***What is the approach to the implementation of the Early ED SAS?***

We want EDs to address, as quickly as possible, how they manage patients who could be treated earlier in the ED. Implementation will be straight forward for those EDs who have existing physical space and staffing resources to adopt the model. These EDs can implement the model quickly and begin operation within three months. For the EDs that require additional infrastructure - minor capital works and

staff resources – they can put in place interim plans to begin testing the model in their ED within three months and work toward full implementation for the model within six months.

## ***Why do we need a toolkit?***

This toolkit has been created to help you set up the ED SAS model in your ED. It does not dictate day-to-day tasks, but rather defines typical phases and activities that you will undertake. It also identifies mandatory achievements - checklists - to demonstrate that implementation is on track and progressing with minimal risk.

You know your service, the staff available, and the specific aims you wish to achieve. So you, with your team, can shape a detailed plan of tasks and responsibilities. We have created tools and documents to help you communicate and display common information, create a business case for the change and to assist you in implementing the model that works for your ED. All of these tools and templates are included in this toolkit.

## ***Who should use this document?***

This document is intended as a guide and reference for Project Managers leading the implementation of the ED SAS model in NSW EDs. We encourage you to share the templates with your Implementation Team, and encourage others to read this guide so they clearly understand the objectives of the model and their role in its implementation. This implementation toolkit should be read in conjunction with the ED SAS Model of care document.

Your Local Health District (LHD) is positioned to assist with and support the implementation of the model in your ED so all queries and requests for support should be directed to them. The NSW Ministry is available to assist with any queries about the model and its intended operation.

## SECTION 1

# Introduction

## 1.1 Emergency Care Redesign

Clinical Services Redesign provides a way for staff working in the NSW Health system to improve patient experiences and access to care. The redesign program has formed an integral part of the strategy to transform the NSW health system.

It focuses on:

- Process improvement – changing the way we do things to improve processes and deliver better patient journeys
- Capacity building – providing staff with the skills to undertake improvement projects at the local level
- Business processes – applying redesign principles to build capability in the domains of Finance and Business Program Management.

New approaches to delivering emergency care have been designed and implemented across NSW; these Clinical Services Redesign projects have resulted in new ways of delivering better care for patients and carers. The Models of Emergency Care seek to facilitate a patient journey that is safe and of the highest quality.

The ED Senior Assessment and Streaming (ED SAS) Model of Care is the latest model of Emergency Care to be developed and is now available for implementation in NSW Emergency Departments (EDs). Implementation of the ED SAS will require a change in the way that the ED workforce is organised and ED care is delivered.

There are fundamental elements required when facilitating change. By developing a solid understanding of these change elements and giving them structure, you will give your implementation project the best chance of success. This toolkit has been developed to assist you in that implementation role.

## 1.2 Why do we need a Senior Assessment and Streaming Model of Care?

EDs are experiencing increasing pressure due to a growing number of patient presentations and emergency admissions. Pressures are experienced as a result of an ageing population, a higher acuity of patients presenting, increasing demand for inpatient beds and increasing rates of hospital occupancy — these factors result in delayed access to an inpatient bed (access block). This growth has resulted in increased workloads on staff and delayed access to emergency care for patients.

EDs can also face substantial variation in demand (e.g. by time of day or a seasonal phenomenon) coupled with ineffective processes for assessing and treating patients experienced in some EDs. Hence a continual challenge exists in meeting the demand for emergency care and the requirement for hospitals to optimise ED and hospital bed capacity. This must also be attained in the context of safe, high-quality patient care and the efficient use of resources.

The National Health Reform Agreement on Improving Public Hospital Services<sup>1</sup> includes the National Emergency Access Target (NEAT) to improve access to ED services. This requires ED patients to be admitted, referred for treatment or discharged within four hours of presentation. Currently, this target is being met for 67% of NSW ED patients<sup>2</sup>. Of the admitted patients, 19% are treated and admitted to hospital within four hours and 60% within eight hours<sup>3</sup>. However, the target will present a challenge nationally to EDs who are not meeting it, and data indicates that to do so, significant change needs to occur.

<sup>1</sup> National Health Reform Agreement - National Partnership Agreement on Improving Public Hospital Services, [http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/D31A66C82824E2AECA2579540005F639/\\$file/NHHN%20NPA%20on%20PHS.pdf](http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/D31A66C82824E2AECA2579540005F639/$file/NHHN%20NPA%20on%20PHS.pdf), last accessed 19 December 2011.

<sup>2</sup> Bureau of Health Information, 2011, Emergency Departments, Hospital quarterly performance of NSW public hospitals, July to September 2011. [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au) (last accessed 19 December 2011).

<sup>3</sup> Ibid.

The National Elective Surgery Target (NEST), introduced in January 2012, has the potential to impact on the ability of EDs to meet the four-hour target for admitted patients.

NEST aims to increase the number of elective surgery patients treated within clinically appropriate times, thereby decreasing waiting time. In this context, the delivery of NEAT and NEST must be considered and planned for with the development of strategies to conserve hospital capacity to meet NEST targets and strategies to create capacity (both in the hospital and as alternatives to hospital) to meet NEAT targets

The aim of developing the ED Senior Assessment and Streaming model of care is to identify the areas of patient care management where the greatest challenges exist, and that are within the control of the ED to change.

### **1.3 The Principles of the Senior Assessment and Streaming Model of Care**

A set of key principles has been developed that underpin the Senior Assessment and Streaming Model of Care. These include:

- Improving the timely access to safe and quality ED care and reducing the ED length of stay through a patient-focused model
- Reallocating the ED workforce and physical spaces to meet demand and provide patients with earlier access to assessment and care
- Requiring senior medical decision-makers for early assessment and disposition decisions — to enable all patients to be safely assessed in the Streaming Zone
- Limiting the length of patients' initial assessment by the Senior Medical Officer assessments (less than 10 minutes) and their lengths of stay in the Early Treatment Zone (two hours)
- Operating at peak periods of activity in ED — the model is designed to be flexible to meet the needs of individual EDs and patient presentations
- Relying on a teamwork approach to providing emergency care
- Including all triage categories 3–5 presentations and triage category 2 presentations if required
- Ensuring a one-way directional flow of patients with no returning to the waiting room
- Relying on robust models of care in place for streaming within and outside the ED.

### **Benefits of the Model**

Key benefits of the model have been identified as:

- Improved quality outcomes for patients — early treatment and risk stratification
- Improved patient and carer experience
- Improved patient flow and system outcomes
- The creation of an organised and coordinated way of managing ED business to improve the working environment.

A case study example of successful implementation of the ED Senior Assessment and Streaming model of care is provided in Appendix U.

## SECTION 2

# The Implementation Toolkit

### 2.1 What is the purpose of toolkit?

This toolkit has been developed to assist project managers and other relevant staff to facilitate the adoption of a systemic approach for the implementation of the ED SAS model of Care in their ED. The Early Emergency Department Senior Assessment and Streaming Model of Care (2011) document should be read in conjunction with this toolkit when implementing.

### 2.2 Who should use the toolkit?

This toolkit is designed to be used by an ED that wants to redesign their care models to facilitate safe, quality and timely access to emergency care, and to assist the ED in meeting the National Emergency Access Targets.

### 2.3 How do I use this toolkit?

The toolkit is divided into two sections:

1. An overview of the implementation process
2. Key implementation activities – This section takes a closer look at the detailed activities recommended for inclusion as part of implementation. Please note there are also ‘Gateway’ activities included at the end of each phase to assist you in completing all required activities before moving to the next phase.

**Optimising ED throughput is one means by which to manage the increased demand for ED services.**

Source: ED SAS Model of Care, NSW Health

## SECTION 3

# The Implementation Process: an overview

### 3.1 What are the main steps for implementation?

This toolkit recommends an implementation process that is divided into four phases:

Phase 1: Project management – to establish the foundations and governance structures for implementation.

Phase 2: Define and assess – to understand what you are trying to achieve.

Phase 3: Develop how ED SAS model will operate in your ED.

Phase 4: Implement and monitor – to test and implement the ED SAS model, and monitor and manage change through data analysis and reporting.

### 3.2 How long should it take?

Typically, implementing the ED SAS model should take no longer than three months. This will depend on available resources to support the model, as implementation will include reconfiguration of existing staff roles and physical spaces. If the ED requires the recruitment of additional staff or minor capital works to effectively implement the model, implementation may take up to six months for completion.

An implementation schedule for the introduction of the ED SAS model is set out below. This is an indicative timeframe only, as the availability of physical and human resources will influence the timeframes involved. Remember, you will then need to adjust your overall timeframe as a part of your detailed Implementation Plan.

### 3.3 What key structures and roles should I have in place?

As Project Manager, you need to establish the appropriate support to drive decisions and implement changes, while also having access to resources to lead activities and deliver the required actions. The toolkit provides checklists and

questions to assist your reporting and decision-making, and provides advice on how to engage and communicate with relevant groups and individuals.

As a starting point, you will need to consider the structure and roles of your Implementation Team. These have been detailed in the following section – Step 1 of setting up your SAS implementation team.

Figure 1: Implementation activities: a four-phase process

	Phase 1: Project initiation/management	Phase 2: Define and assess	Phase 3: Plan for the operation of the SAS model	Phase 4: Implement and monitor
Weeks to complete	Week 1 – Week 3	Week 4 – Week 8	Week 9 – Week 11	Week 12
Activities	<p>There are six key activities to consider in relation to project initiation and management. These are:</p> <ul style="list-style-type: none"> <li>Step 1: Set up SAS implementation team and obtain executive support</li> <li>Step 2: Develop a project implementation budget for the SAS model</li> <li>Step 3: Map and engage key stakeholders</li> <li>Step 4: Develop an implementation plan</li> <li>Step 5: Establish a communication plan</li> <li>Step 6: Develop a risk register</li> </ul>	<p>Confirm the case for change:</p> <ul style="list-style-type: none"> <li>Step 1: Undertake a detailed data analysis and assessment of current ED service provision and demand.</li> <li>Step 2: Qualitative data collection and analysis</li> <li>Step 3: Interpret the data to determine how the SAS model will operate in your ED</li> <li>Step 4: Hospital and ED readiness</li> <li>Step 5: Confirm the operating requirements for the SAS model in your ED</li> <li>Step 6: Define the objectives for change</li> <li>Step 7: Developing a business case</li> </ul>	<p>There are seven key activities to consider in developing the implementation for your SAS Model. These include:</p> <ul style="list-style-type: none"> <li>Step 1: Define the processes and procedures that need to be documented for the SAS model</li> <li>Step 2: Confirm clinical governance arrangements for the SAS model</li> <li>Step 3: Confirm operational arrangements for the SAS model</li> <li>Step 4: Determine the infrastructure and equipment needs for the SAS model</li> <li>Step 5: Determine workforce needs for the SAS model</li> <li>Step 6: Determine the monitoring measures needed for the SAS model</li> <li>Step 7: Revise the implementation plan</li> </ul>	<p>There are four key activities to consider in implementing and evaluating the SAS model. These include:</p> <ul style="list-style-type: none"> <li>Step 1: Pilot the SAS model for a defined period of time</li> <li>Step 2: Evaluate the trial</li> <li>Step 3: Confirm arrangements with support services</li> <li>Step 4: Initiate a review of communications and a marketing launch of the model with stakeholders and the patient community</li> <li>Step 5: Monitor the change management</li> <li>Step 6: Wind down the implementation team.</li> </ul>
Outcomes			<ul style="list-style-type: none"> <li>ED data has been collected and analysed</li> <li>The implementation team will understand how or if the SAS model will help their ED after assessing ED data</li> <li>Establish how the SAS model will operate in your ED</li> <li>Detailed business case that justifies the need for implementing the ED SAS model</li> <li>Team members are meeting regularly and understand respective accountabilities</li> <li>Cost of implementing the model is known</li> <li>Key stakeholder have been engaged and a detailed communication plan has been established</li> <li>Team has agreed on an implementation plan</li> <li>Any risk the project may encounter have been highlighted.</li> </ul>	<ul style="list-style-type: none"> <li>The SAS model has been piloted on multiple occasions during the week and weekends</li> <li>The Pilot has been assessed qualitatively form staff and patients and quantitatively against ED data collected in Phase 2</li> <li>Disseminate final communications before the start official date</li> <li>Monitor the implementation of the SAS model to facilitate a smooth and streamlined transition</li> <li>Wind down team and establish a future point of contact for the ED staff</li> </ul>
Available tools			<ul style="list-style-type: none"> <li>Appendix A: Project team structures</li> <li>Appendix B: Example project governance structure</li> <li>Appendix C: Project Status report template</li> <li>Appendix D: Budget template</li> <li>Appendix E: Stakeholder analysis template</li> <li>Appendix F: Implementation plan template</li> <li>Appendix G: Communications plan template</li> <li>Appendix H: Risk register</li> </ul>	<ul style="list-style-type: none"> <li>Appendix N: Staff roles and responsibilities</li> <li>Appendix O: KPI template</li> <li>Appendix P: Lessons Learnt template</li> <li>Appendix Q: Team Debrief template</li> </ul>

Figure 2: Example implementation plan and schedule

Phase	Step	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	.12 weeks ongoing
Phase 1 : Project initiation and management	1: Setup SAS implementation team and obtain executive support 2: Develop a project implementation budget for the SAS model 3: Map and engage key stakeholders 4: Develop an implementation plan 5: Establish a communication plan 6: Develop a risk register													
	<b>Communication tip:</b> Promote the ED SAS model and how it will work, e.g. newsletter and face-to-face meetings													
Phase 2: Define and assess	Case for change 1: Undertake a detailed data analysis and assessment of current ED service provision 2: Qualitative data collection and analysis 3: Interpret the data to determine how the SAS model will operate in your ED 4: Hospital and ED readiness 5: Confirm the operating requirements for the SAS model in your ED 6: Define the objectives for change 7: Developing a business case													
	<b>Communication tip:</b> Present your ED data to show the potential benefits of the ED-SAS model via newsletter and meetings.													
Phase 3: Plan for operation	1: Define the processes and procedures that need to be documented for the SAS model 2: Confirm clinical governance arrangements for the SAS model 3: Confirm operational arrangements for the SAS model 4: Determine the infrastructure and equipment needs for the SAS model 5: Determine workforce needs for the SAS model 6: Determine the monitoring measures needed for the SAS model 7: Revise the implementation Plan													
	<b>Communication tip:</b> Discuss how the model will operate in your ED and align with support services													
Phase 4: Implement and monitor	1: Trial the SAS model 2: Evaluate the trial 3: Confirm arrangements with support services 4: Initiate a review of communications and a marketing launch of the model with stakeholders and the patient community <b>ED SAS model ready to commence</b> 5: Monitor the change management 6: Wind down the implementation team.													
	<b>Communication tip:</b> Provide ongoing communication of the results of the model to your stakeholders newsletter and meetings													

## SECTION 4

# Key Implementation Activities

## Phase 1: Project initiation and management

The purpose of this phase is to establish the arrangements for directing, managing and progressing the implementation of the ED SAS model in a way that maintains a focus on delivering the intended benefits of the model. This phase will include engaging key stakeholders and setting up the project team.

### Activities

**There are six key activities to consider in relation to project initiation and management. These are:**

**Step 1: Set up ED SAS implementation team and obtain executive support**

**Step 2: Develop a Project Implementation budget for the ED SAS model**

**Step 3: Map and engage key stakeholders**

**Step 4: Develop an implementation plan**

**Step 5: Establish a communication plan**

**Step 6: Develop a risk register**

**Successful implementation of changes will depend on effective project management throughout the period of the project**

**Step 1: Set up ED SAS implementation team and obtain executive sponsor support**

**Why do I need an implementation team and executive sponsor support?**

Effective leadership and team support is crucial for the success of any project involving the accomplishment of multiple activities. This project requires a strong implementation team to guide and execute the

implementation of the SAS model of care. As Project Manager, it is therefore crucial that you obtain support at the executive level and establish a group of key stakeholders to champion the redesign project and lead its implementation.

### ***Who should be on my implementation team?***

For successful implementation, it is **essential** to select an appropriate team. This team must be:

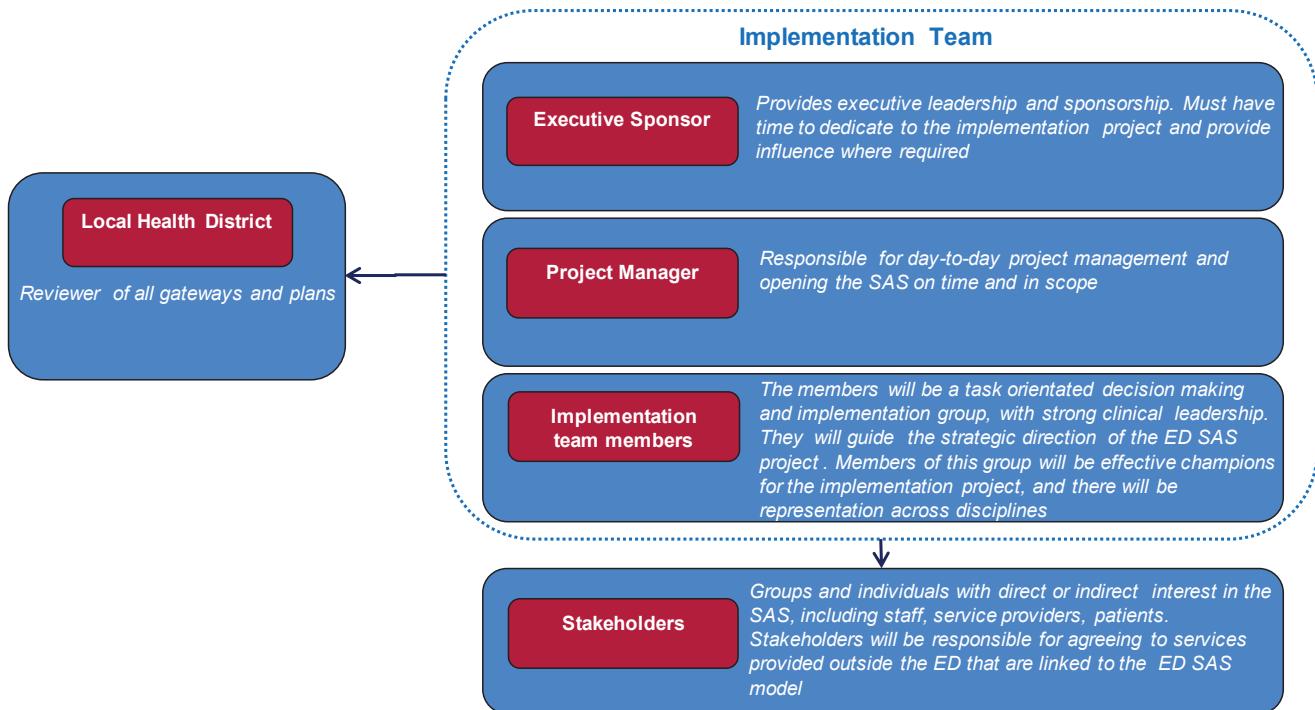
- ED focused
- Representative of clinical, clerical and ED management
- Willing to embrace change
- Motivated

Your team should include:

- Executive-level sponsorship
- Someone with knowledge of redesign
- Senior medical and nursing representation
- Managers of the external services the ED will be streaming to eg Hospital in the Home, outpatients.
- Support services representation
- Data manager
- Where possible a consumer representative

An example of a project structure has been outlined below in Figure 3 along with an overview of the role of each team member.

Figure 3: Sample project structure



### **What are the roles and responsibility of my project team?**

**Executive Project Sponsor:** This team member will provide executive leadership and sponsorship. They must demonstrate commitment and have a high level of interest in the outcomes of the implementation project. Their role will be to legitimise the ED SAS goals and objectives and to be a visible and vocal champion for the model in the LHD. The Executive Project Sponsor will have responsibility for securing and allocating resources for implementation and will report implementation progress back to the LHD Executive.

As Project Manager, you will schedule regular time with the Executive Project Sponsor for support and coaching as the project progresses.

**Project Manager:** As Project Manager, you will understand the principles of the ED SAS model and have experience in the ED that is adopting the model. Your experience might include managing a service or undertaking change projects. You will have experience in managing multidisciplinary groups, and be dedicated to this project for the period of implementation plus the initial service delivery period.

**Implementation Team:** The Implementation Team, lead by the Project Manager, will consist of individuals assigned with delivering the implementation of the ED SAS. The team will be given the responsibility for guiding the strategic direction of the project and making final decisions. Members of this group will be champions for the implementation project with representation across disciplines (e.g. medical, nursing, data analysis) and support services (e.g. medical imaging, pathology, inpatient team representatives and IT services).

Team members will have the capacity and expertise to undertake discrete activities within the project, produce documents and make initial decisions on the day-to-day workings of the ED SAS model. Some members of the Implementation Team will need to be available for the duration of the implementation period plus an additional period of time to provide support to the SAS team in the early days after the service opens.

Note: The project will benefit from having a consumer representative on the Implementation Team. This is an optional role and if consumer representation is not available this should not delay the project progress.

**Stakeholders:** The stakeholder group will consist of multiple groups of people with different roles to play in the implementation. This group may include people who:

- Should be kept informed
- Will be participants in the process
- Will be affected by the new ED SAS model.

Changes from implementation of the ED SAS model may require input and sign-off from some stakeholders even though they are not accountable for delivering any of the implementation activities.

### **How do I develop a good team?**

It is important to remember that effective teamwork doesn't just happen by putting people together in a meeting room. The true benefit of using a team is that it allows for a collective output that is greater than the sum of individual efforts.

Some key hints for developing a good team include:

- Agree on the team ground rules at the first meeting
- Outline team objectives and how the team will operate
- Clearly define each person's roles and responsibilities and what is expected of them in the project, e.g. what is the expected workload and duration of their role
- Communicate regularly to keep the team aligned on goals and identify and troubleshoot any issues that arise
- Create an environment that recognises this work as an integral part of improving the ED, understanding that team members are busy and have little capacity to take on additional 'project work'.
- Share the leadership and match tasks with the skills of your team

Once your implementation team has been appointed, a number of questions need to be asked to help the team understand how they will work, for example:

- Who will be your decision-making body – that is, the group to which you escalate issues, and seek approval to move the project forward?
- What are the project governance structures?
- Who will you, as Project Manager, allocate particular tasks to?
- How will you maintain executive and clinical support for this project?
- How will the wider stakeholders be involved in the formal decision-making process?

We have included the following templates in the Appendices to facilitate the set up of your project structure: Implementation Team Structures (Appendix A) and Sample Governance Structures (Appendix B).

**Implementation team and stakeholder meetings:** The implementation timeframe is intended to be short, intense and focused on starting the delivery of the ED SAS model quickly. The implementation will require decisions to be made efficiently and effectively. Therefore, regular meetings with the implementation team and stakeholder groups are essential.

We recommend **weekly Implementation Team meetings** and weekly or fortnightly communication between the Project Manager and Executive Project Sponsor. Each meeting should result in action items for team members with allocated timelines for completion.

You will need to work with your Executive Project Sponsor to schedule meetings with the LHD to provide project status updates, secure resources and prioritise issues that need to be addressed.

Completed checklists and plans (such as project plan, communication plan etc) should be provided to your LHD (and the Health Service Performance Improvement Branch (HSPIB)) upon completion of each phase for review and endorsement to move to the next phase.

Things to consider:

- Agree how your Executive Project Sponsor and LHD will receive progress updates.
- Agree upfront what your Executive Project Sponsor expects as outputs at each phase, and where they want to be included in the decision-making and approval process.
- Decide if a senior clinician is required to work alongside you as Project Manager on a day-to-day basis.
- Share work plans, practices and schedules with the implementation team and have a dedicated physical space in which key project documents are available for the team to access.
- Have a data manager in your implementation team to manage all data information
- Review your team's roles and responsibilities as you work through your stakeholder mapping and communication planning – you might want to change areas of focus or responsibility for key activities based on

- analysis of your stakeholders and their communication needs.

See Appendix C for a status report template.

#### **Recommended tools and templates:**

**Appendix A: Project team structures**

**Appendix B: Example project governance structure**

**Appendix C: Project Status report template**

## **Step 2: Develop a project implementation budget for the ED SAS model**

### **Why do I need a budget?**

The purpose of the project budget is to allow you to better understand the resources available for implementation and to identify any financial gaps so that a business case can be developed to address them. Ideally, you will use existing resources or reconfigure your ED to mitigate the need for additional funding.

As part of developing your budget, it is important to clarify all approval processes and overall accountability. Your LHD Executive Project Sponsor can help you to define the funding required for implementation costs, its source, and financial reporting requirements. The budget will be revised continuously as you work through the model needs for your ED. You will need to consider other costs for implementation such as additional resources, capital expenditure and any IT development. Costs relating to stock and supplies, equipment, and staffing should be considered as part of the overarching ED budget, and not the project's budget.

A Budget Template to help get you started on this exercise is found in Appendix D.

#### **TIP:**

- **Revise your budget again in Phase 3, once infrastructure and staffing requirements have been determined.**

## **Step 3: Map and engage stakeholders**

### **Why do I need to map and engage stakeholders?**

One of the most important tasks you will undertake as Project Manager is to decide who your key stakeholders are and then engage with them to support the implementation of the new model. Mapping your stakeholders with the implementation team is an essential activity for the project. The information you gain will directly feed into the creation of your Implementation Plan and Communications Plan.

**Mapping your stakeholders** – The stakeholders for this project will include individuals and groups, those with direct interest in and accountability for its implementation; people who will be affected, and those who may only be involved intermittently. As Project Manager, it is necessary to facilitate appropriate representation from all the disciplines and services that will affect and be affected by the implementation of the ED SAS model.

Considerations for a comprehensive list of stakeholders:

- **Scope of ED SAS services** – Consider the scope of services proposed for the ED SAS model and list everyone who is involved in the delivery of these services — from doctors and nurses to radiographers and other support services. If staff understand the aim of the ED SAS model and what is involved in its delivery, they will have a greater sense of ownership and involvement in making the model a success.
- **Types of changes** – Consider the nature of the changes that will occur in the ED and how you will need to introduce them (e.g. movement of staff, refurbishment of an existing clinical area), and think about the different people who will make this happen.
- **Patients** – The patient is at the heart of the ED SAS model and needs to be included as a stakeholder. We need to plan how best to communicate the new service, remembering that there are patients that frequent the ED often and know the system well. They will want to know why the process has changed and how it will affect them.
- **Type of consultation** – Consider the level of consultation that will be completed to support the data and build the case for implementing the ED SAS model of care. List everyone –medical, nursing, allied health, management and support staff - who will need to be involved in these consultations and the format in which it will be undertaken. You may need to consider consultation workshops or focus groups.

- **Types of communication** – Think about the typical types of communication in any change project – progress updates, instructions or requests, reminders, and information to explain or persuade change. Remember, the communication might add another layer of stakeholders to your stakeholder list.

We have suggested a key list of people that may need to be consulted; however, this will need to be confirmed with your Implementation Team:

- ED staff – all the doctors, nurses and administrative staff who will be required to drive and support this project
- In-patient admitting teams – medical and surgical
- Staff from models of care external to ED, e.g. Hospital in the Home (HiTH), outpatients and Medical Assessment Units
- Hospital executives
- Diagnostic services – e.g. medical imaging and pathology
- Other ED staff – e.g. wardsmen
- IT services
- Patients.

We have provided a Stakeholder Mapping template and a sample list of core stakeholder to get you started in Appendix E. You may find it helpful to review and change this list with the wider Implementation Team.

**TIP:**

- **If people are involved and understand what is happening they will have a greater sense of ownership and be more likely to get involved in making the ED SAS a success.**
- **Engage IT services early – as they have to plan and prioritise work and should be contacted early and kept up to date with the progress of implementation to facilitate the smooth transition of IT services**
- **In your consultations include stakeholders who you think will resist the model. They will help to raise issues with the project which should allow for development of mitigation strategies early.**

## Step 4: Develop an implementation plan

### *Why do I need an implementation plan?*

An implementation plan provides details of all the tasks that need to be undertaken by the implementation team matched to an agreed timeframe. It also outlines the high-level milestones that act as key checkpoints for the project. The plan clearly demonstrates to your team and executive project sponsor how you will deliver the ED SAS model and what is required to launch the model by the agreed date.

### *What should be included in my implementation plan?*

It is **essential** that your implementation plan clearly outlines the project milestones and major activities required to implement your project. This document needs to include the date by which each milestone or major activity is to be completed, and who is responsible. You should refer back to the high-level implementation plan in section 3.2 to establish timeframes that are suitable for your own ED.

The implementation schedule will become the primary tool for the Project Manager to assess the progress of the project. The implementation plan should include:

- Project phases, activities and tasks against a timeline
- Project milestones (descriptions and dates)
- A project schedule depicting when the tasks will be undertaken, as some activities will be dependent on completion of other activities.
- A list of identified interdependencies, assumptions and risks.

An implementation plan template has been provided for you in Appendix F.

## Step 5: Establish a communication plan

### *What is a communication plan?*

A communications plan is a schedule of communication activities that set out deadlines and accountabilities to your target audiences. The communication plan for redesign projects is crucial to communicate changes and progress to all relevant stakeholders, including patients and staff.

### *Why do I need a communication plan?*

The purpose of the communication plan, together with your stakeholder map, is to help you maintain and build engagement with all involved or affected by the ED SAS model, in order to affect the change you want to create in

your Emergency Department. You need to communicate the reasons for the model and how it will operate and affect people in and outside the ED to avoid any unwanted surprises.

### **Establishing a communication plan**

The team needs to consider which communication strategies will be most useful to meet the needs of various stakeholders at different levels of the facility. It is important that stakeholders receive regular updates from the implementation team regarding the progress of the project work plan, especially during the early phases of the project. Stakeholder needs will be different depending on their level of influence and support for the project. Ideally, all stakeholders should be asked their preferred means of communication. More in-depth communication will be needed to keep stakeholders with high influence fully informed of project progress.

Things to consider:

- Begin communication early
- What are the key changes in the ED that need to be articulated to stakeholders?
- Who are the different audiences and what are the key messages you want them to hear?
- How would your stakeholders like to receive information – by email, documents, discussion or other means?
- What information do patients need about the ED SAS model?
- How regularly does the implementation team need to meet or share information?
- As the clinical environment is complex, with stakeholders often juggling many competing demands, **multiple methods of communication will be most effective** to increase the chance that those who need to receive information about the project will get it.
- Your Communications Plan is a live document, **not a one-off activity**. Keep your Communications Plan simple so it can be easily updated
- Your Communications Plan should be regularly updated in consultation with the Implementation Team - at a minimum this should occur at the end of each phase

A Communication Plan template has been provided in Appendix G. This can be used as a prompt to guide communication activities. Remember, the Communication Plan is to assist you to deliver the right message to the right person at the right time – so use it often and update it often. You should also use the Communication Plan

to manage the timing and frequency of communications and prevent repeated and unnecessary circulation of information.

Communication materials such as an example newsletter has been provided in Appendix H

#### **TIP:**

- **Regular face-to-face meetings are recommended as the primary communication strategy in building and maintaining engagement with stakeholders, however ED clinical (particularly medical) staffing numbers and rostering, will often make regular face to face meetings with the same team members impossible. Flexibility in scheduling and communication mode (eg teleconference, webinars etc) will be required.**
- **It is essential to engage executives and departmental heads early in the project to gain support.**
- **The creation of an implementation plan and communication plan is not a one off activity; it is something that you as Project Manager will update throughout the project.**
- **Communication of the changes and progress to all ED staff is vital. This may include up to 100 staff members so use existing communication mechanisms regularly, eg staff meetings, education sessions, email, web-based.**

## **Step 6: Develop a risk register**

### **What is a risk register?**

A risk register records identifiable risk during the life of the project. Risks are graded in terms of likelihood of occurring and seriousness of impact on the project. Initial plans for mitigating each high-level risk, the costs and responsibilities of the prescribed mitigation strategies and subsequent results should be included in the risk register.

### **Why do I need a risk register?**

The risk register is a key project management tool that should be discussed at each team meeting. The tool provides the implementation team and LHD with a documented risk mitigation strategy that identifies risks and minimises the chance of jeopardising the progress of the project. It also assists in identifying any interdependencies

that the team need to be aware of and monitor closely, i.e. if critical steps have not been completed it will affect the progress of the project.

### ***How do I develop a risk register?***

As you plan the details of your ED SAS model and establish your case for change, you will identify a number of risks. Similarly, as you progress through the implementation itself, new risks will arise and others may be mitigated or resolved. With your Implementation Team, carry out a thorough analysis of all potential risks and develop strategies to mitigate these risks. Work through identifying risks until the Team has exhausted all possible scenarios. The more you know about potential risks the more prepared you will be to manage them.

You should keep the risk register as an ‘audit trail’ of the risks as they come and go and report on these to your Executive Project Sponsor at each meeting (see also the Project Status Update template). Your Executive Project Sponsor can also use the register when reporting back project progress to the LHD.

Typically, a risk register contains:

- A description of the risk
- The impact of the risk should the event occur
- The probability of its occurrence
- A summary of the planned response
- A summary of the mitigation (the actions taken in advance to reduce the probability and/or impact of the event)
- Actions by nominated person and due date.

**TIP:**

- **Highlight potential risks as early as possible in the project. This will minimise the potential for unexpected issues to arise later in the project and threaten implementation.**

A risk register template is provided in Appendix I.

**Recommended tools and templates:**

- Appendix D: Budget template**
- Appendix E: Stakeholder mapping template**
- Appendix F: Implementation plan template**
- Appendix G: Communications plan template**
- Appendix H: Newsletter example**
- Appendix I: Risk register**

# Checklist

Well done! You have completed Phase 1 of the ED SAS model Implementation Project. Before you move on to Phase 2, please complete this checklist and send a copy to your Executive Project Sponsor and LHD for review.

Have you:

- Nominated a dedicated Project Manager for the life of the project to lead the implementation project
- Established an ED SAS Implementation Team and each member's roles and responsibilities have been outlined
- Established Executive sponsorship and support
- Established and scheduled meeting dates for the implementation team
- Developed the Implementation project budget
- Completed Stakeholder mapping exercise
- Prepared Implementation plan
- Prepared Communications plan
- Developed a Risk register

**NOTE: Along with the checklist the following plans need to be submitted to your LHD and NSW Ministry of Health on completion of phase 1.**

- **Communication plan**
- **Project status report**
- **Risk register**
- **Implementation plan**
- **Completed stakeholder mapping**

## Phase 2: Define and assess

The purpose of this phase is to assist you in understanding what you are trying to achieve and to prepare you for the implementation and redesign of your ED processes. In this phase you will analyse your ED's data, set objectives for implementing the new model and create a business case for change to present to your Executive Project Sponsor.

### Activities

In preparing a sound case for change for the implementation of the ED Early Senior Assessment and Streaming model of care, a number of key steps will need to be completed:

#### **Confirm the case for change:**

**Step 1: Undertake a detailed data analysis and assessment of current ED service provision and demand.**

**Step 2: Complete a qualitative data collection and analysis**

**Step 3: Interpret the data to determine how the ED SAS model will operate in your ED**

**Step 4: Hospital and ED readiness**

**Step 5: Determine the operating requirements for the ED SAS model in your ED**

**Step 6: Define the objectives for change**

**Step 7: Developing a business case**

#### **Confirm the case for change**

It's important to determine from the outset the overall aims and objectives of implementing the ED SAS model and that continuing to provide emergency care in the same way is not a viable option for the future. You need to document the aims and objectives, and the vision for the preferred model of care so you can use it to guide the implementation process.

Together with your Implementation Team, consider these questions:

- What are we trying to achieve by introducing the ED SAS model?

- What is the current situation in our ED and what needs to change?
- What evidence do we have that describes the current challenges experienced in our ED?
- What evidence do we have that will guide decision-making around the implementation of the model
- What patients will the ED SAS target, and what are the intended benefits?
- When does it need to be implemented by?
- How will we know if the change is an improvement?

The activities you carry out in this phase (e.g. data analysis, stakeholder engagement) will help to deepen your understanding of the needs of your ED and guide the operational details of the model in your ED.

Further detail is provided on these activities over the following pages. As a minimum however, you should make sure that there is documented agreement in principle to the questions above (purpose, scope, and timeframe) as this will influence how you carry out these activities.

**Note:** It is recommended that you use existing resources or reconfigure your ED arrangements to run the ED SAS model. If you need additional staffing or capital works your Executive Project Sponsor can help decide the level of detail and documentation you require to develop a formal business case.

#### **TIP:**

- Discussing the model and its intended benefits with the implementation team is a great way to bring them on board with what you are trying to achieve and to help anticipate future stakeholder concerns.
- Do not go into too much detail in these discussions about the specifics of your model of care; instead, aim for agreement on the principles and rationale for the ED SAS model, and the benefits and overall objectives of implementing it.

## **Step 1: Undertake a detailed data analysis and assessment of current ED service provision and demand.**

Taking the time to understand the current level of activity and associated performance in your ED is the first step to identifying the most suitable implementation approach for the ED SAS model. Undertaking a detailed data analysis will provide you with an understanding of your current service provision and where gaps in service provision exist, i.e. the periods of greatest activity, with overcrowding and delays in access to care for all triage categories; periods of greatest delay in accessing inpatient beds from ED. An analysis of your ED data will also provide an understanding of the predicted volume and variability in demand by triage category and patient type, and inform the most appropriate operating hours to manage the predicted demand in ED.

Quantitative data analysis has been conducted as part of the NSW Health Ministerial Taskforce for Emergency Care (2011). A web-based method of reviewing selected data is available for all NSW hospitals that report ED data. The report data is taken from the Patient Administration System (PAS) discharge information, and reports have been developed in conjunction with MTEC as a means of understanding the types and volume of patients and their length of stay. Reports are available across all NSW peer group hospitals and are designed to assist clinicians with decision-making to improve patient access to emergency care. The reports also allow your ED to compare performance and activity against its peers.

Data available at an ED level can also be benchmarked against EDs in each LHD and across peer group hospitals. This data is readily available for various categories — e.g. number of separations, length of stay, triage waiting times, top 10 Diagnostic Related Groups (DRGs) and admission data — and should be used to support your business case. To access this MTEC data, please go to the NSW Health intranet site at <http://internal.health.nsw.gov.au/data/mtec/index.html>. We recommend viewing the quarterly report; it will assist in guiding your interpretation of the data.

To fully understand demand at your Emergency Department it is recommended that data be analysed using trends over a 12-month period. You will need to consult with your ED data manager to extract reports from the ED data system (e.g. FirstNet, EDIS or iSoft) and to assist in understanding the data available. Additional assistance with data should

be sought through your LHD or local performance unit and Health Information Exchange (HIE) data.

Data about patient experience and satisfaction is also important to understanding the current state of your ED. This data can be used as the basis for assessing the successful implementation of the model and the impact it has on patient experience.

The data items for review are listed in Table 1 (see over page).

Table 1: Data items for review and sources of data.

Data Item	ED/hospital data information	MTEC data	IPSE	Local Data collection	Payroll System
Current ED activity					
■ By triage category	✓				
■ By time of day	✓				
■ By day of week	✓				
■ By month of year	✓				
Off Stretcher Time (OST)	✓				
Performance data for ED and hospital:					
■ Emergency Access Performance (8 hours)	✓	✓			
■ Total patients assessed, treated and discharged or admitted within 4 hours	✓	✓			
■ Waiting times by triage category	✓				
Length of stay by:					
■ Triage Category	✓	✓			
■ Admitted patients	✓	✓			
■ Discharged patients	✓	✓			
■ Top 10 DRGs	✓	✓			
Did not wait	✓	✓			
Left at own risk	✓	✓			
Representations to ED within 48 hours	✓	✓			
Patient experience/ Patient Survey data					
■ Access to care			✓		
■ Care coordination			✓		
Staff satisfaction				✓	
Staffing levels (FTE)					
Medical staff					✓
Nursing staff					✓
Support staff					✓

To assist your data analysis, a data request template has been included in Appendix J.

## Step 2: Qualitative data collection and analysis

To consider all aspects of your Emergency Department, qualitative data collection is an important step in the implementation of the SAS model. This data will highlight the current state of your Emergency Department and other characteristics to better inform the details of the most appropriate SAS model and the implementation requirements. Pre implementation qualitative data is essential as it will be important when evaluating the success of the implementation.

### ***Understanding the current and desired state for your ED***

It is recommended that you carry out a process mapping exercise to better understand the detailed steps and processes in the patient journey in your ED, or the 'current state' of your ED. This activity can be done with your implementation group and other key staff in the ED who have a good understanding of the patient journey. The processes can be mapped using paper and post-it notes, through interviews and focus groups.

When process mapping, you will want to ask the following questions:

- What is the start and end points of our process mapping for the patient journey? (e.g. starts with presentation at triage and finishes with disposition and discharge from the ED)
- Where are the delays in the patient journey?
- What is causing these delays?
- Where is there duplication in the tasks/processes?
- What are the different disposition locations for patients and how do we get them there?
- Which specific patient groups experience the longest delays?
- What is the patient experience in our current system?
- Are there any areas of concern to patient or staff safety?

This information will be key to assisting you to design a 'to be' model and patient flow process suited to your ED.

An example of the desired patient flow journey can be seen in Appendix K.

**When designing or redesigning processes to reach improvement targets, it is important to think of people working smarter, not harder.**

Additional information can be collected through targeted questions to complement the data analysis. This will assist the ED in building the business case for implementation. You may wish to do this with the Implementation Team or alternatively, build consultation with staff into your communications plan and engage them in focus groups and workshop sessions.

It should be noted that not all questions are applicable to each ED. Similarly, there may be other questions that you need to ask when assessing the feasibility of the ED SAS model for your ED. Key questions are listed below.

### ***Management***

- Can you describe current delegations or management reporting channels for the services to be included in the ED SAS model?
- What clinical leadership do we need to operate the model?

### ***Current services***

- What models of care do we have available within the ED for patients to be streamed to?
- What models of care do we have available external to the ED for patients to be streamed to?
- Can we access these models readily for our patients?
- Is there timely access to support services e.g. pathology, medical imaging, Allied Health?

### ***Patients***

- What is the current volume of patient activity that could benefit from the ED SAS model?
- What is the clinical priority of these patients (e.g. from triage category 1 to 5)?
- What are the largest clinical groupings of patients that could benefit?
- What are the peak times that these patients typically present for treatment?
- What protocols or procedures are in place that can be used to support referral, access, triage/assessment, treatment and transfer or discharge processes?
- What is the potential impact on patient outcomes of implementing this model?

## **Staff**

- Are our current staff disciplines and skill sets aligned with those required in the ED SAS model (see ED SAS model of care)?
- What changes will be required to current staff roles to implement the ED SAS model?
- How many staff are required to provide services under the ED SAS model?
- What staff are currently available in our ED to staff the model?
- Do you expect that demand will increase over time?
- Do you need to consider re-skilling, redeploying or recruiting staff?
- What clinical support can we build into the model to facilitate learning and development for staff?
- What needs to change in our rostering patterns to staff the model?
- What impact will movement of staff have on patients and the rest of the ED?
- Can the SAS roles be taken from existing roles – e.g. do we have a staff member to assume the role of streaming coordinator?
- What are the key relationships required for this service, e.g. with support services, human resource and IT?

A skills matrix template has been provided to assist you in determining your staff needs and is included in Appendix L.

## **Logistics**

- What physical spaces will be required to operate the ED SAS model?
- Do we have spaces available in our ED that can be reconfigured to provide this model?
- What equipment, stock and supplies are required?
- Do we have ready access to all necessary equipment in close proximity to the Streaming Zone, e.g. point of care testing?
- Can we determine if additional costs will be required in implementing this model? Do we know what the current budget is and if any local funding is available?
- What will change with the support services we need, e.g. for pathology and medical imaging?
- What are the barriers to implementation of the model, e.g. staff acceptance, availability of experienced nursing and medical staff, and physical spaces available to house the model?
- What are the key areas that impact on the capacity of the ED to expand, redesign or realign the current emergency care models to include the ED SAS model, e.g. hospital readiness?

The qualitative data obtained from answering these questions will provide additional detail to interpret the quantitative data analysis and can also highlight the influences on any potential new emergency care model including local challenges, capacity and readiness for change.

### **TIP:**

- **Focus your data analysis on understanding your current service provisions. This will help determine if the model is suited to your ED and direct how the model will operate in your ED.**
- **You may need to schedule implementation team meetings to capture some of the information on current service provision. Don't rely only on data collection. Remember to schedule these meetings in the Implementation Plan and circulate discussion points in advance so people can be prepared and provide accurate and relevant information.**

## **Step 3: Interpret the data to determine how your ED SAS model will operate**

Emergency Departments are considered to have a predictable number of presentations; however, we know that this number will vary across different periods of the day, days of the week and different months of the year. Variation will also be seen in the types of presentations to the Emergency Department.

The qualitative and quantitative data that has been collected is essential to understanding how to design the implementation of a new model of care. The interpretation of the data will assist you to plan the hours of operation for your model, staffing requirements and the physical placements of the Streaming Zone and Early Treatment Zone.

The information below will assist you to interpret the data and decide the implementation approach that best suits your ED:

- Where activity peaks for a short period of time the ED SAS model should be considered for those short periods.
- Where activity peaks and remains high for an extended

Depending on time the ED SAS model should be considered for extended periods of the day.

- Where there are occasional irregular peaks of activity, for example on certain days of the week or public holidays, these variations in activity should be factored into planning the operation of the model to occur periodically and not daily.
- Where activity peaks for a certain group of patients only, e.g. patients suited to a fast-track model, you should consider whether the ED SAS model is most suitable or whether an extension/enhancement of a current emergency care model is required.

Taking the time to understand your ED's current activity levels, associated performance and patient types and will allow you and the Implementation Team to:

- Expand your understanding of the aims for implementation of the ED SAS model
- Confirm the most appropriate operating hours for your ED
- Confirm the size of your Early Treatment Zone
- Deepen your understanding of the volume and type of ED patients suited to the ED SAS model
- Clarify the skill sets and number of staff required
- Provide a baseline from which to measure benefits and impacts
- Gauge the extent and types of changes required to implement the ED SAS model.

Now that you have collected and interpreted the data it is essential to **report the findings**. Information collected should be reported in a way that allows you and your ED Implementation Team to understand the operating requirements, define the objectives and build the business case for ED SAS implementation.

Reported findings should include:

- what you have found about the current state of your ED patients' journey
- data to support any delays and the patient groups most affected
- findings that inform and support the desired state for your ED – ie the ED SAS model implementation –and for specific patient groups.

## Step 4: Hospital and ED readiness

Organisational readiness for change is an important consideration for any change or implementation of a new way of working. The changes must be structured and implemented in a way that facilitates sustainability over time. Factors that can influence sustainability can be:

- The local workforce requirements and availability of staff
- The physical spaces used to operate the ED SAS model (and their level of permanence)
- Acceptance of the new processes and way of working.

Your ED must be willing to adopt the new ED SAS model. Planning for sustainability right from the start of the project is important to see long-term positive results from its implementation.

It is also important to assess the readiness of your organisation or ED when preparing for implementation of the new model of care, and if necessary to put in place mitigation strategies and enablers for project acceptance.

A template to assess change readiness has been included in Appendix M.

## Step 5: Determine the operating requirements for the ED SAS model in your ED

One of the biggest challenges you face as Project Manager is keeping the project on track and keeping your implementation team on task with sufficient focus and prioritisation of the project. The nature of the project, involving both data collection and stakeholder consultation, will mean that there is a lot of activity occurring at the same time. It is essential at this stage that you keep the implementation team focused on reaching consensus about the final recommended implementation approach for your ED.

Agreement on key outcomes is needed from your Project Sponsor and Implementation team on the following questions:

- What type (case-mix) and volume of patient services will we provide services for?
- What capacity (physical area and workforce – type and number) will we need?
- Where is our preferred delivery site in the ED?

Now that you have examined and reported the data and determined the acceptability of the model in your ED, you will be able to determine the operating hours of your ED SAS model. This will depend on the peak periods of activity, expected volume of patients, the availability of physical space and the availability of experienced medical and nursing staff.

In determining the operational arrangements of your ED SAS model, the collection and analysis of the following data will assist with deciding the model's features:

- The volume and expected growth of ED presentations, by triage category and presenting problem, DRG and time of arrival
- The ED profile, challenges and barriers and intended benefits and enablers to implementation.
- The degree of clinical engagement and acceptability of the model by ED and hospital staff
- The availability of the workforce to staff the model
- The availability of physical space to implement the model
- The ease of access to the space by staff and patients
- Anticipated patient volumes and peak periods of activity for when the model should be operational.
- The availability of support services such as pathology, medical imaging and pharmacy
- The existence of models of care to stream patients to once they have been assessed in the Streaming Zone
- The alignment of agreed objectives of the intended benefits of the ED SAS model to the national reform agenda and National Emergency Access Targets
- ED and implementation team expectations of a start date for the model.

**TIP:**

- **Depending on your available resources, you may need to consider additional approval points or processes, such as a full business case, in order to proceed to implementation of the model. Your Executive Project Sponsor can advise on this and provide you with local guidelines on requirements for a business case.**

## Step 6: Defining the objectives for change

It is important to determine from the outset the overall aims and objectives for redesigning your ED processes to accommodate the ED SAS model and why the status quo cannot continue. The rationale for ED redesign should be documented and referred to throughout the implementation process.

Based on the quantitative and qualitative data, you can set objectives and the time within which you will achieve them — this might include the specific amount of improvement, by percentage that you want to attain. The use of the SMART acronym will assist in setting aims that are specific, measurable, achievable, realistic and time-limited.

Your overall objective or aim for the project should seek to answer the question, 'Where do we want to go and in what timeframe?'

**TIP:**

**When setting objectives consider:**

- **The need to understand the full extent of the problem including baseline and benchmarks where applicable**
- **The change implications in relation to time and resources required**
- **Setting 'stretch' targets to assist with motivation – this should be achievable but challenging to do**
- **The solution is not the aim, e.g. appointing a streaming coordinator is an intervention not an aim.**

Some examples of SMART objectives include:

- To increase to 100% in 6 months the percentage of patients presenting with chest pain (or other symptoms of Myocardial Ischaemia) and assessed in the Streaming Zone, who are commenced on the Chest Pain Pathway
- To reduce the number of ED patients waiting longer than their recommended times by 10% in the next three months
- To reduce the average LOS for the top 10 DRGs by 50% within six months
- To increase the number of patients assessed, treated and discharged within four hours from 67% to 75% in three months.

- To increase the number of patients who receive analgesia within 20 minutes of arrival in ED from 25% to 75% within three months.

## Step 7: Developing a business case

Consideration of the need to develop a business case for additional resources and/or reconfiguration of the ED is the final step in the Define and Assess phase.

A business case will illustrate and frame the need and benefits for redesigning your ED, including the financial impact associated with performance. If the redesign requires additional resources and minor capital works, i.e. financial support, a business case will present the case for change in a format that the hospital executive will relate to. The hospital executive will require a documented business case and cost benefit analysis to inform any approval decisions. The data analysed in this phase is essential to support and create a successful business case that will be submitted to your LHD for funding.

It is important to get agreement on the purpose, scope, and timeframe of the redesign of your ED. The following questions and answers will set out a vision for the ED SAS model:

- What are we trying to achieve by introducing the new model?
- What evidence do we have that describes the current challenges experienced?
- What are the intended benefits?
- What are the model requirements to function effectively and safely?
- When does it need to be implemented by?
- How will we know if we have got this right?

We have provided a template to assist in preparing your business case. The template is not prescriptive but forms a guide to preparing an appropriate business case. The main headings include:

- Overview: options appraisal, costs and benefits
- Introduction: background, problem statement, strategic and redesign objectives
- Options analysis: preferred option justification
- Procurement of services and equipment
- Project strategy: key milestones and deliverables
- Cost-benefit analysis

- Project management and control: business case, governance, risk management, progress monitoring.

To assist in development of your business case, questions for developing the business case and a business case template have been provided in Appendices N and O.

### TIP:

- **The business case helps to document the decision-making process and provides a means by which the LHD can prioritise and gain effective support for cost effective proposals. The business case is a well-defined case for change that demonstrates the benefits of implementing the Model of Care — benefits to the patients, the ED, hospital and LHD — and justification of costs of implementation.**
- **Your LHD may have a preferred business case template and it is important that this is identified before you begin writing your business case. Seek help from your LHD in completing the business case to meet the needs of your LHD Executive.**

### Recommended tools and templates:

- |                    |   |
|--------------------|---|
| <b>Appendix J:</b> | <b>Data collection template</b>                                 |
| <b>Appendix K:</b> | <b>Example ED SAS patient pathway</b>                           |
| <b>Appendix L:</b> | <b>Staff skills template</b>                                    |
| <b>Appendix M:</b> | <b>Hospital and ED readiness template</b>                       |
| <b>Appendix N:</b> | <b>Questions to assist the development of the business case</b> |
| <b>Appendix O:</b> | <b>Business case template</b>                                   |

# Checklist

Have you:

- Completed quantitative and qualitative data collection
- Completed data interpretation analysis
- Completed the questions for qualitative data analysis
- Reported the findings from data analysis
- Completed the ED readiness assessment
- Determined the preferred ED SAS model
- Determined the aims/objectives for implementation
- Completed the business case where required.

## Phase 3: Plan for the operation of the ED SAS model

The purpose of this phase is to define and document the planning required to implement the ED SAS model in your ED.

### Activities

**There are seven key activities to consider in developing the implementation for your ED SAS model. These include:**

**Step 1: Define the processes and procedures that need to be documented for the ED SAS model**

**Step 2: Confirm clinical governance arrangements for the ED SAS model**

**Step 3: Confirm operational arrangements for the ED SAS model**

**Step 4: Determine the infrastructure and equipment needs for the ED SAS model**

**Step 5: Determine workforce needs for the ED SAS model**

**Step 6: Determine the monitoring measures needed for the ED SAS model**

**Step 7: Revise the Implementation Plan**

**Step 1: Define the processes and procedures that need to be documented for the ED SAS model**

### *Why do I need to outline processes and procedures for the ED SAS model?*

Rigorous clinical and operational procedures must be in place to enable efficient and easy access to the ED SAS model. Staff should clearly understand what is required of them so that they can undertake their responsibilities consistently and safely.

It is not necessary to create all new processes and procedures; rather, you should modify existing ED processes and procedures to align with the ED SAS model.

### *Document clinical and operational procedures*

Clinical and operational processes and procedures streamline the patients' care through the ED SAS area and maintain safe practice for patients and staff. Most of the information and principles you need for this is documented in the NSW Health Early ED SAS model of care. You should only need to adapt this information to suit the needs of your ED.

Clinical procedures will include:

- Identifying which patients are suitable for the ED SAS model
- Role and responsibilities of ED SAS model staff
- Facilitating a quick triage process
- Streaming zone functions and processes
- Early Treatment Zone functions and processes

Operational procedures will include:

- How to avoid patients queuing for the Streaming Zone
- Processes to move the patient through the ED after Streaming/Early Treatment Zones
- Opening and closing the SAS service

**Note:** For the model to be a success there are core clinical principles that must be in place. This includes, quick triage, early assessment by a senior medical staff member (ED staff specialist/ Senior Registrar /Senior ED CMO) taking no longer than 10 minutes, and a streaming coordinator to facilitate flow of patients. Aspects of the ED SAS model that are flexible are the hours of operation to match peak demand, size of your ETZ and the location(s) patients are streamed to.

The following checklist in Table 2 will help you to determine where you may need to develop or modify processes and procedures.

Table 2: Suggested ED SAS model procedures

ED SAS model procedures	Yes	If no, what action is required?
Role and responsibilities of SAS staff	<input type="checkbox"/>	
Triage	<input type="checkbox"/>	
Opening and closing the ED SAS model	<input type="checkbox"/>	
Function of Streaming Zone	<input type="checkbox"/>	
Function of Early Treatment Zone	<input type="checkbox"/>	
Functional bed capacity	<input type="checkbox"/>	
Escalation processes	<input type="checkbox"/>	
Handover from the ED SAS model	<input type="checkbox"/>	

Things to consider:

- Consultation with the staff delivering this service to help identify and address any processes and procedures requiring development.
- Documenting a process does not have to mean process-mapping all your activities. Use existing procedures and protocols where they exist, and amend them if necessary to reflect new governance arrangements or new roles.
- Evidence-based guidelines on care planning and delivery should be in place.
- Achieving effective planning, delivery and coordination of care may be supported by clinical pathways or care plans. Clinical pathways – such as sepsis and chest pain – can be leveraged from the ED and adapted to the ED SAS model as needed.

**TIP:**

For the procedures listed in Table 2, refer back to the ED SAS Model of Care document for the information to be adapted and included.

### ***Why do I need SAS clinical governance arrangement?***

You will need the governance arrangements to help manage, direct and understand who will be accountable for the ED SAS model being developed and implemented, and for ongoing clinical monitoring. These arrangements can also support the ED SAS model linkages with other models of care external to ED such as MAU.

### ***How to establish the clinical governance arrangement***

Governance of the SAS should follow the same governance structure as the ED. The ED SAS model is an extension of the ED; therefore, the governance should be part of the usual ED clinical governance procedures. It is essential the structure, role, and responsibilities of the ED SAS model be documented to remove ambiguity about how the model will be run and to help resolve issues and risks arising in later stages.

Confirmation of the following is required:

- Who will have responsibility for the day-to-day running of ED SAS model? Who will they report to clinically and operationally? What are the reporting requirements? Who is responsible for providing assurance to management teams about clinical standards, patient safety and monitoring outcomes?
- Will there be any changes in relation to current clinical capabilities for staff working in the ED SAS model? Does there need to be specific skill sets or clinical experience for nursing staff? Is there a need to upskill current ED staff to work in the ED SAS model?
- Is there a current documented clinical governance framework between the ED SAS model and support and diagnostic services?

## **Step 2: Confirm clinical governance arrangements for the ED SAS model**

### ***What is clinical governance?***

Clinical governance is the overarching responsibility of the governing body who has the responsibility for the quality of care delivered by a service and that this accountability is shared equally with the clinicians delivering the care.

- What other clinical governance considerations are needed to support this new model?

### **Define the ED SAS model's role in the ED**

Roles and responsibilities of the ED SAS model should be clearly defined with the procedures and reporting processes agreed.

Things to consider:

- How will the ED SAS model be supported at different levels (e.g. executive level)
- How will the model fit within the ED's existing decision-making processes?
- How will staff involved in the ED SAS model be informed of developments through the reporting processes in ED?
- Are there documented authority levels and escalation points in the ED SAS model that link in with the ED?
- How will the ED SAS model be organised and evolve over time?
- Accountabilities, roles and responsibilities should be clearly documented and defined in governance frameworks, position descriptions and committee terms of reference.

Refer to Appendix P for further examples of workforce roles and responsibilities.

#### **TIP:**

##### **A clinical governance framework:**

- Supports an environment that fosters quality through monitoring the quality of care
- Provides a regular report to the governing body on the quality of care
- Minimises risk and identifies and effectively addresses deficiencies in the quality of care

### **Step 3: Confirm operational arrangements for the ED SAS model**

In Phase 2 you collected data and assessed the needs of your ED to determine the operational requirements for the ED SAS model. In this step use the information from Phase 2, including that from the business case, to confirm and document the operational governance, location, operating hours and patient flows through the ED SAS model.

### **What is operational governance?**

Operational governance is the overarching responsibility that the governing body holds for the non clinical functions of the SAS.

### **Why do I need an operational governance arrangement?**

You will need these governance arrangements to help manage, direct and understand who will be accountable for the ED SAS model that is being implemented.

### **What should the operating hours be?**

The operating hours of the ED SAS model should reflect the volume and patterns of patient presentations in the ED. In Phase Two, you should have collected data regarding the current level of patient activity and peak times in which patients present to the ED.

Using the original objectives of the ED SAS model, the Implementation team should agree on the opening hours based on patient activity. Remember to think about the impact this will have on other services that are linked to the ED (e.g. medical imaging) and also on staffing costs.

#### **TIP:**

- It is essential to commence ED SAS before your busy period commences – don't wait until the ED is near or at capacity. Starting early will improve patient flow and reduce the risk of bottlenecks occurring.
- The ED SAS model is designed to be flexible: operating hours can be changed to match demand.

**SAS daily opening and closing:** The ED and support services should be informed when the SAS is opening and closing for the day. When closing the service, consideration must be taken for patients that need to stay in the ED. It is important to also consider at what point before closure the Early Treatment Zone ceases to accept patients (remember, the time frame for holding patients is limited to two hours for this area).

When piloting the ED SAS model, before opening each shift a briefing session should be held with SAS staff to reaffirm roles and responsibilities, types of patients for assessment and treatment, and how the model will operate. Development of this model at Westmead Hospital found this step essential in continuing to reaffirm the goals and

outcomes of the model. A debriefing session should occur when the shift finishes, discussing what worked well, what could be improved and any risks identified. This is discussed in more detail in Phase 4 – implement and monitor.

**Entry and exit points:** You will need to take into consideration the location of SAS activities in the ED and the clinical needs of the department. The ED SAS assessment and treatment area will need to have easy access to triage, point of care testing equipment, medical imaging and the ED acute care area. After considering these aspects, the Implementation Team should choose the key entry and exit points into and out of the SAS area, remembering that patients could be transferred on trolleys and in wheelchairs.

**Site footprint:** Discussions regarding the capacity of assessment and treatment areas should have taken place in Phase 2 with an exercise to identify and design a workable and safe environment, appropriate for delivering SAS services. The ED SAS model of care recommends designated assessment and treatment areas, and ease of access to clinical staff and diagnostic equipment. It is recommended that where possible, you redesign an area of your ED to accommodate the ED SAS model.

Where there are no available and useable spaces in the existing ED, engage your Facilities Manager (or equivalent) to help the Implementation Team produce a footprint for your SAS and locate a potentially appropriate area to house the model. Identify a clinical lead person to work with the facilities manager and to inform operational considerations at an early stage.

**TIP:**

- **ED SAS model operating hours should reflect the ED highest volume times for categories 3, 4 and 5 patients.**
- **During the early stages of operating the model, it is essential that before opening and after closing the service for the day a briefing be held between staff members. This includes nursing and medical staff so that they can agree on roles, processes and which patients are accepted to this model, as well as to understand each other's skill sets and limitations.**
- **Collection and analysis of information from debriefing sessions will assist in refinement of the model.**

## Step 4: Determine the infrastructure and equipment needs for the ED SAS model

The physical design of the ED must be flexible and provide for current and future operational needs that support the change initiative. Some EDs may be able to reorganise their physical space to accommodate the ED SAS model; while others may require minor capital works.

**Note:** It is **essential** you trial the ED SAS model within the existing framework of your ED before determining if any infrastructure changes are required. This will allow you to assess what infrastructure changes would best suit your needs before committing to any capital works in your ED. Further discussion on an SAS trial is included in Phase 4.

### *What are the infrastructure and design requirements of the ED SAS model?*

Answering this question will help to address the design of the site for the ED SAS model, internal building layouts and fixtures, fittings, furniture and equipment. The successful implementation of an ED SAS model is dependent on the physical space available in the ED and the availability of the associated infrastructure and equipment required.

**Note:** It is **essential** that the ED SAS model has easy access to Triage for easy access for patients and for the streaming coordinator to move between the two areas to facilitate patient flow. If this flow between triage and the Streaming Zone is not established, the model runs the risk of being dysfunctional and ineffective.

When assessing infrastructure and design needs, think about whether you require:

- Changes to the infrastructure or physical layout of the ED - if yes you must refer to the Executive Project Sponsor and develop a business case
- Procurement of any new fixtures, fittings, furniture or equipment

If the answer to the question above is yes, you will need a business case to:

- Identify overarching governance, delivery assurance, and management structures in place to oversee any required infrastructure or fit out changes

- Detail specific requirements and delivery/fitting dates.

### **Determine equipment and other support service requirements**

Equipment and support services are a component of all ED SAS models of care. Information on equipment and support services required can be found in the ED SAS model of care.

Some things to consider include:

- IAccess to pathology point-of-care testing equipment
- IEquipment needed to support the ED SAS model e.g. monitoring equipment, IV poles, trolleys and recliner chairs
- IFlow requirements needed between the ED SAS model, triage, acute care area and other services. The model is designed to have a unidirectional flow therefore, try and arrange your SAS setup to reflect this.
- IRequirements to enable appropriate information flows between the SAS services and ED support services such as pathology, medical imaging, clerical staff, in-patient teams and other external referrals.
- IICT systems currently in place to support the ED SAS model - do any new technologies need to be integrated with existing technologies (e.g. patient monitoring systems to connect to central monitoring systems, ICT system enhancements to allow SAS data collection)?

### **Step 5: Determine workforce needs for the ED SAS model**

As an integral part of the ED SAS model, you will need to confirm the workforce model (understanding the capacity and type of staff you will need and how you will deploy them), and a workforce transition plan (detailing where you will get your staff from and any training requirements).

Your workforce strategy should capitalise on using the existing staff skills in the ED - some EDs may need to upskill staff to work in the ED SAS model. The benefits of the ED SAS model for staff are a reduction in duplication of work and the non-value added waits for patients that add to ED overcrowding. These benefits will enable many EDs to redesign the current roles in their ED and reconfigure clinical responsibilities to suit the model. It is important to note that patients will have been assessed and diagnostic tests completed, a provisional diagnosis made and management plan completed while in the ED SAS model. This will reduce the workload in other areas of the ED.

Implementation of this model at Westmead ED involved reallocation of one ED Staff Specialist from the acute area to the ED SAS model during operating times. When the model ceased to operate the Staff Specialist returned to the acute area to continue assessing and treating patients. The Nurse Streaming Coordinator was redeployed from the existing second triage position and returned to this position out of operating hours.

If no staff are available for the ED SAS model, recruitment may be necessary and must be weighed up with your Executive Project Sponsor and Implementation Team in relation to benefits of the model. The capability and skills framework is used as a basis for assessing the existing capabilities, defining the existing gaps, and developing a plan to address and close those gaps, including a cost estimate.

#### Mandatory staff for the ED SAS model

The ED SAS model **must** have (at a minimum) the following staff to effectively run the ED SAS model:

- Medical
  - Preferably, an ED staff specialist, or Senior Registrar /Senior ED CMO/
  - Assistant Medical Officer – Junior registrar/CMO/ RMO working under the supervision of the senior MO
- Nursing
  - Registered Nurse – streaming coordinator
  - Junior ED nurse or Enrolled Nurse – Streaming Zone nurse
  - Registered nurse (CIN level) – Early Treatment Zone.

#### **Rostering staff for the ED SAS model**

It is recommended that medical staff are rostered for no longer than four consecutive hours per shift to minimise fatigue - the streaming zone is an intensive high-paced area with a high turnover of patients.

Care must be taken when rostering staff for the ED SAS service to allow for the appropriate clinical skillmix in both the ED SAS model and in the ED.

## **Preparing new or revised role descriptions**

Role descriptions including job function and activities, responsibilities, accountabilities and processes of performance management should support the ED SAS model.

It is assumed that most ED staff will work across all ED areas and the SAS model; hence current role descriptions may only need to be revised. Where new roles are created, role descriptions will need to be created to include the needs of ED and the new ED SAS model.

## **Recruitment and redeployment**

It is not expected that additional staff will necessarily need to be recruited to work in the ED SAS model. What is important is that the right people with the right skills are selected to fulfil the roles within the ED SAS model. All organisations will have their own policies, methods, and criteria for internal selection. Existing processes should be adapted or developed so that the selection process is carried out as quickly and as thoroughly as possible.

Things to consider:

- Where appropriate, map existing staff to roles in the new model.
- Put in place clearly defined selection procedures to enable a consistent recruitment policy for both internal and external recruitment activities.

### **TIP:**

- **Refer back to the skills matrix you completed in Phase 2: define and assess - this will assist in determining your staffing needs.**

## **Transitioning the workforce and provide training where required**

Fundamental to sustained transformation is supporting people to successfully 'transition' from old to new ways of working. When preparing for the commencement of services, you should consider how you will familiarise staff with their new service area or delivery location. As your workforce is mobilised to the model, you will need to consider the training required for all staff as well as inductions for new staff. Don't forget to add this non-clinical activity time into your scheduling.

Consider how staff will be supported in forming new teams

and working relationships. It may be that the majority of staff know and have worked with each other in the past and will transition into their new roles without issue. Discuss the transition and new ways of working with all staff to see how they would like to manage the new processes.

As you create your workforce transition plan, consider the following:

- What impact will the ED SAS model have on existing staff? Refer to your current state assessment.
- Will there be any impact on the ED that requires consideration of redeployment or backfill, options?
- What local arrangements exist regarding pool/redeployed staff that you might need to consider?
- What lead times do you need in order to transition staff?
- What training is required for new or existing staff? How long will it take to introduce?
- What training must be undertaken before service delivery (i.e. mandatory) and what can be provided on the job?

Once you have finalised your workforce and transition models, you will need to include this information in your budget, and update your Implementation and Communications Plans accordingly. You should discuss with your Executive Project Sponsor where costs associated with transitioning staff should be located.

### **TIP:**

- **Focus on using existing ED staff for the ED SAS model.**
- **It is essential to have a Senior Decision-making Doctor that can make a provisional diagnosis and disposition decision in less than ten minutes.**
- **The model also requires a cohesive, fast working team that can work collaboratively and efficiently.**
- **Involve your core SAS staff members as early as possible in the implementation team and testing prior to the start date. This will help embed ways of working but also build the team going forwards.**

## Step 6: Determine the monitoring measures needed for the ED SAS model

### *Why do I need to use monitoring measures for the ED SAS model?*

Including monitoring measures will help you to evaluate the safety, quality and timeliness of patient care and the effectiveness of the ED SAS model by comparing the ED pre and post ED SAS model implementation.

### *What monitoring measures do I need?*

Now that your business case is complete for your SAS, you need to define how you will measure the changes and the effectiveness of the ED SAS model. The operational and clinical monitoring measures you determine will assist to demonstrate changes and improvements in overall patient care.

As part of the process of developing the aims of implementation, it is worthwhile considering the measures you will use to monitor implementation progress and improvements in access to care in your ED as a result of the ED SAS model. Monitoring measures help to focus resources and effort so it is important to choose your measures carefully.

The ability to measure patient outcomes is an essential part of any improvement process. Robust performance monitoring and evaluation incorporates data collection, analysis, review and communication of results. These processes contribute to the development of an evidence-based understanding of the quality of the ED and SAS service by measuring them against common standards of care.

Two types of monitoring measures should be considered in relation to emergency care and the ED SAS model:

- Operational indicators: measuring the operational monitoring of the ED and ED SAS model, such as patient wait times, LOS, off-stretcher times, NEAT and patient turnaround times.
- Clinical indicators: relates to patient safety more specifically and measures the 'clinical management or outcome of care' of patients, such as time to analgesia, time to antibiotics, morbidity, mortality rates, adverse events, patient satisfaction and complaints.

Monitoring measures should be purposeful, clearly defined and easy to interpret.

#### TIP:

- choosing monitoring measures:
- Data should be readily available
- The effort to collect the data should not outweigh the benefit
- You may need to choose a surrogate measure rather than the perfect measure. Despite the vast data available in the health system, there is often a lack of true outcome measures and as a result you may need to use an indirect measure.

Refer to Appendix Q for a template to assist in developing your monitoring measures.

## Step 7: Revise the Implementation Plan

### *Why do I need to revise my implementation plan?*

It is important at this stage to go back and review your initial implementation plan as changes may have occurred or need to occur. This will include reviewing your communication plan, timelines, and budget.

### *Revising your plan*

Remember, your implementation plan should document a logical sequence of events that describe the ED SAS model design and outlines the phases through to implementation and delivery of services and to the final evaluation of the model.

When revising your implementation plan you should include your Executive Project Sponsor and Implementation team. Together the team should revise:

- The progress of activities and tasks
- Responsibilities for each activity, broken down into specific tasks if necessary
- Completion dates for activities and tasks
- Sequencing of tasks that depend on the completion of other tasks
- Any perceived risks and ways identified to overcome them — these risks will be added to the Risk Register
- The communication plan
- The key implementation milestones
- The implementation budget requirements.

You will have already completed the implementation plan included in Appendix F that provides the framework for the implementation process. You can also use this document to help you provide progress updates as required.

# Checklist

Well done! You have completed Phase 3 and are well on the way to successful SAS Implementation. Before you move on to Phase 4, please complete this checklist and send a copy to your Executive Project Sponsor and LHD for review.

- Documented operational policies and procedures
- Defined clinical protocols and care pathways
- Confirmed clinical governance arrangements
- Confirmed operational arrangements
- Determined infrastructure and equipment requirements
- Determined workforce requirements
- Determined workforce transition plan
- Developed and agreed operational and clinical monitoring measures
- Revised implementation plan, communication plan and budget

## Phase 4: Implement and Monitor

The purpose of this phase is to test, revise and implement the model, and to monitor and manage the change by the collection, analysis and reporting on monitoring measures.

### Activities

**There are four key activities to consider in implementing and evaluating the ED SAS model.**

**These include:**

**Step 1: Trial the ED SAS model for a defined period of time**

**Step 2: Evaluate the trial project**

**Step 3: Confirm arrangements with support services**

**Step 4: Initiate a review of communications and a marketing launch of the model with stakeholders and the patient community**

**Step 5: Monitor the change management**

**Step 6: Wind down the implementation team.**

This is the final phase of the implementation process.

#### Recommended tools and templates:

**Appendix P: Workforce roles and responsibilities**

**Appendix Q: Monitoring measures template**

**The ED SAS model is now ready to be tested and refined for final implementation.**

**Step 1: Trial the model for a defined period of time**

Prior to full implementation, you and your Implementation Team should trial the model, including its operating hours and associated processes. This will help understand some of the challenges and flows that may occur.

When carrying out the trial, it is important to consider the 'what if' questions. By considering all possible negative outcomes and complications beforehand, you can address

areas of risk and develop mitigating strategies to be ready for implementation.

Questions to consider are:

- What if we have unexpected leave and cannot run the model – what is our back up plan?
- What if triage becomes busy and we need to redeploy the Streaming Coordinator to assist?
- What if a queue develops and we need to decant patients from the Early Treatment Zone, how will we manage their ongoing monitoring and care?
- What if patients are waiting in the Early Treatment Zone for a bed in the main ED and we have competing demands from new ED arrivals – how will we manage the waiting list?
- What if there is significant resistance from ED staff during the trial that impedes success of the trial?
- What if we can not engage key stakeholders? What is our escalation process?
- What if there is significant resistance from senior medical staff to change the current processes in when and how patients are assessed?

These questions are not exhaustive and the Implementation Team should work through possible scenarios until they are satisfied they have discussed and planned for any issues that have a likelihood of occurring.

Now you are ready to test the model. Begin with small steps to allow for easy assessment and refinement before committing to a final approach to implementation of your model. The testing process may be carried out as follows:

- Trial on one day for several hours (e.g. 10am–2pm) and debrief and review what worked well and what needs to be adjusted
- Trial it in daylight hours over the course of a week and reassess what worked well and if any further revisions are required
- Once working well in daylight hours, trial it on a weekend and in the evening and reassess and revise the model as required.

A **team debrief** after each trial period is essential to understanding what works best for your ED, the staff and patients. It is important to debrief with staff working in model to identify to any issues or area for improvement. To assist with running a team debrief a debriefing template has been provided in Appendix T.

This testing should take no more than three weeks to complete. Once you have tested and refined the model including patient flows, communication processes and operating hours, you can prepare for implementation.

**TIP:**

- It is recommended that when trialling the ED SAS model you begin mid-week when ED activity is less to allow staff to adapt and ready themselves for implementation.
- Include staff that may be resistant to the change in the trial of the model as they often raise many challenging questions which need to be resolved for successful implementation
- Avoid scheduling any testing of the model around medical and nursing staff education sessions.
- Refine the model as part of the testing period so that it is ready for implementation on completion.
- Have the implementation team available to help in the ED SAS model during the trial as they can 'trouble-shoot' any issues

- What sign-off or approval is required to confirm that the site/assessment and treatment spaces are fit for their intended purpose?

**TIP:**

- The sequence of events is all-important here. Work backwards from your deadline and assess lead times for delivery and installation/testing. Add in some extra time to accommodate delays if appropriate.
- Hold Project Team meetings daily during this preparation period. It will help impress on all staff in ED the urgency of the process, but will also allow early identification of problems that need to be addressed quickly.

### Step 3: Confirm arrangements with support services

In your planning you will have identified the changed processes for support services or third party providers. Now is the time to finalise these arrangements with these providers such as medical imaging and pathology. You will also need to make sure that arrangements are finalised with teams operating models of care external to the ED that you will stream to e.g. outpatients departments, short stay units and Hospital in the Home. Mechanisms should be in place to raise and resolve issues as required. As the Project Manager, you should be named as the person whose role it is to manage and monitor these arrangements.

Make sure you include the representatives from the relevant support services in key communication and launch activities.

### Step 4: Initiate a review of communications and a marketing launch of the model with stakeholders and the patient community

Throughout this project, you and your Implementation Team will have met, spoken to, and exchanged information with a large number of individuals and groups. You will have managed this through your stakeholder analysis tool and Communications Plan, and will have updated this as the project progressed. Now you are in the final stages of preparation. It is important to disseminate all final communications before the official start date.

## Step 2: Evaluate the trial project

The measures for monitoring that you identified during Phase 3 will be used to report on activity and outcomes. These will form the basis of your trial evaluation, and will help you understand the impact of the ED SAS model and any refinements required before final implementation.

Now that you have tested the model and refined it to the specifications of your ED, you are ready to implement. You will need to set up your physical spaces and make sure all equipment is in place ready to start. This set up may occur over a week, or you might decide to schedule one intense day of set-up activities, where all stock is delivered and the physical move of any assets occurs.

Consider the following:

- Have we secured a designated area to run the model?
- Who is going to help with the set up and move of equipment?
- Which staff members need to oversee and check the set up?

Consider the following:

- Will you be having a 'soft' launch so that the model can operate and resolve early issues before formally announcing it to the rest of the hospital and the public?
- Who will be the 'face' of the ED SAS model as the point of contact for queries? Will this be the same person who sends hard copy communications, and the same person who presents the model at hospital meetings and forums, and at ED meetings?
- Is your hard copy material (e.g. posters, leaflets) printed and ready? How will it be circulated? Where are the best places to make these available?
- Do all stakeholders affected by the introduction of the model have an understanding of what will change for them? Have they had the chance to have any concerns addressed?

### **Congratulations, you can welcome your first patients!**

Once the model is implemented, your team will continue to support the ED team to resolve any unanticipated issues. You will be required to monitor and make adjustments to the workforce and support service model as required.

Arrange time with your Executive Sponsor to discuss and agree which outstanding actions remain your responsibilities. Review the Implementation Plan and Communications Plan and check that the right people are responsible for any outstanding actions.

As Project Manager, you will be a useful source of information for stakeholders to explain the rationale behind decisions on the ED SAS model, and how these decisions were reached during the implementation period.

## **Step 5: Monitoring the change management**

Successful change management is about accelerating the delivery of benefits in ways that are sustained long after a change has been made. Making change that is lasting requires a change approach that:

- Focuses on benefits
- Encourages involvement
- Builds sustainability.

You will need to monitor implementation and the change approach to facilitate a smooth and streamlined transition

to the new ED SAS model.

### **Collecting and analysing monitoring measures**

The evaluation measurements identified during Phase 3 and used in the trial program will be used to report on ongoing activity and performance to the Implementation Team, Executive Project Sponsor and LHD Executive. These will form the basis of your model evaluation and will help you understand the impact of the ED SAS implementation over time, as well as the experience of staff and patients.

The development of an evaluation plan will assist you to monitor performance, evaluate the impact of implementation of the ED SAS model on the ED and patients, report results to both clinicians and management, and determine changes to the model or future improvements needed. An evaluation plan should comprise:

1. Quality activities – to emphasise patient safety and quality of care you should monitor clinical incidents and sentinel events, patient complaints, the effective use of clinical reviews, and audits
2. Monitoring measures – as identified in Phase 3.

To assist with ongoing evaluation of the ED SAS model, an example evaluation plan can be found in Appendix R.

### **Data Collection**

There should be a plan for the regular collection and analysis of data. At a minimum, data should be collected at baseline (the commencement of the new Early ED SAS model) and then at a later date so that comparisons can be made before and after implementation. As an example, this may occur on a monthly basis following implementation. Change may take time to occur; monitoring should take this into account.

### **Analysis**

Once the initial implementation is complete and the model is considered business-as-usual, monitoring measures should continue to be monitored for ongoing success.

Quality organisations always strive to improve the services they provide. By continuously measuring and monitoring the services delivered, organisations can determine the extent to which they may change their processes and practices to achieve the same or better outcomes.

ED staff must be part of the analysis, as they have a deep working knowledge of EDs and the working environment, and can review data and provide insights into the analysis as well as context.

By reviewing results with risk management in mind, organisations can determine if there is a general trend towards improvement or whether particular parts of the model need to be changed. In the longer term, analysis of the data will assist to prioritise areas for quality improvement.

### ***Reporting***

The process of reporting should be transparent and accountable across different stakeholders including junior staff, other clinicians, health services managers and patients. Most importantly, information should be presented in an easy to read and meaningful format. Data and accompanying information can enable health care organisations to see trends in results and improvements over time, as well as to make comparison with other similar programs carried out by peers.

### **Step 6: Wind down the Implementation Team**

#### ***Congratulations on implementing the ED SAS model in your ED!***

The new ED SAS model will become business as usual and will no longer require project management. At an agreed point, you will want to wind down and cease certain project initiatives and roles. The Implementation Team will have amassed an impressive amount of knowledge regarding the process of implementing the ED SAS model successfully.

As you wind down the team, remember to establish a future point of contact for the ED staff. You may consider holding a celebration event for your Implementation Team and key stakeholders, and schedule a formal debrief to capture the final lessons learnt. This can be reported back to your LHD and NSW Health and shared with other sites undertaking the SAS implementation. To assist with this data capture a 'lessons learnt' template can be found in Appendix S.

**Recommended tools and templates:**  
**Appendix R: Evaluation Plan template**  
**Appendix S: Lessons Learnt template**  
**Appendix T: Team Debrief template**

# Checklist

- Commenced service delivery and monitored implementation
- Monitored change management and updated as required
- Developed an evaluation plan
- Collected, analysed and reported data and information on an ongoing basis
- Debriefed with the project team
- Identified lessons learned

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# Project Structures

## Purpose

To have an established team that is dedicated and accountable to the project.

## When should I complete this?

This should be your first activity of the project. It will occur in Phase 1.

## Project roles and responsibilities of the project team

- The Implementation Team is the group responsible for planning and executing the project. It consists of an Executive Project Sponsor, Project Manager and Implementation team.
- The Implementation Team are responsible for the formulation of the ED SAS model governance, policies and procedures, staff roles and responsibilities, operational requirements and the development of the centre
- Consulting at multiple levels with stakeholders about the project

## Executive Project Sponsor

- The Executive Project Sponsor is a manager responsible for securing and allocating resources for the project, this will include liaising with the LHD and NSW Ministry of Health. They will have a high level of interest in the outcome of the project. Ideally, the Executive Project Sponsor should be the highest-ranking manager possible in regards to the size and scope of the project. They should legitimise the project goals and objects, being the visible and vocal champion of the project. The Executive Project Sponsor must be acquainted with all the major activities and be the end decision-maker for the projects final approval, including any change of scopes, and signing off on approvals to proceed to each succeeding project phase. They should provide support to the project manager.

## Project Manager

- The Project Manager will be in charge of the 'hands on role' in the redesign of the ED to accommodate the ED SAS model. Their role will include forming a team to assist in setting up the ED SAS model. The Project Manager will organise regular consultation amongst the team to formulate the approach and strategy of the redesign project.

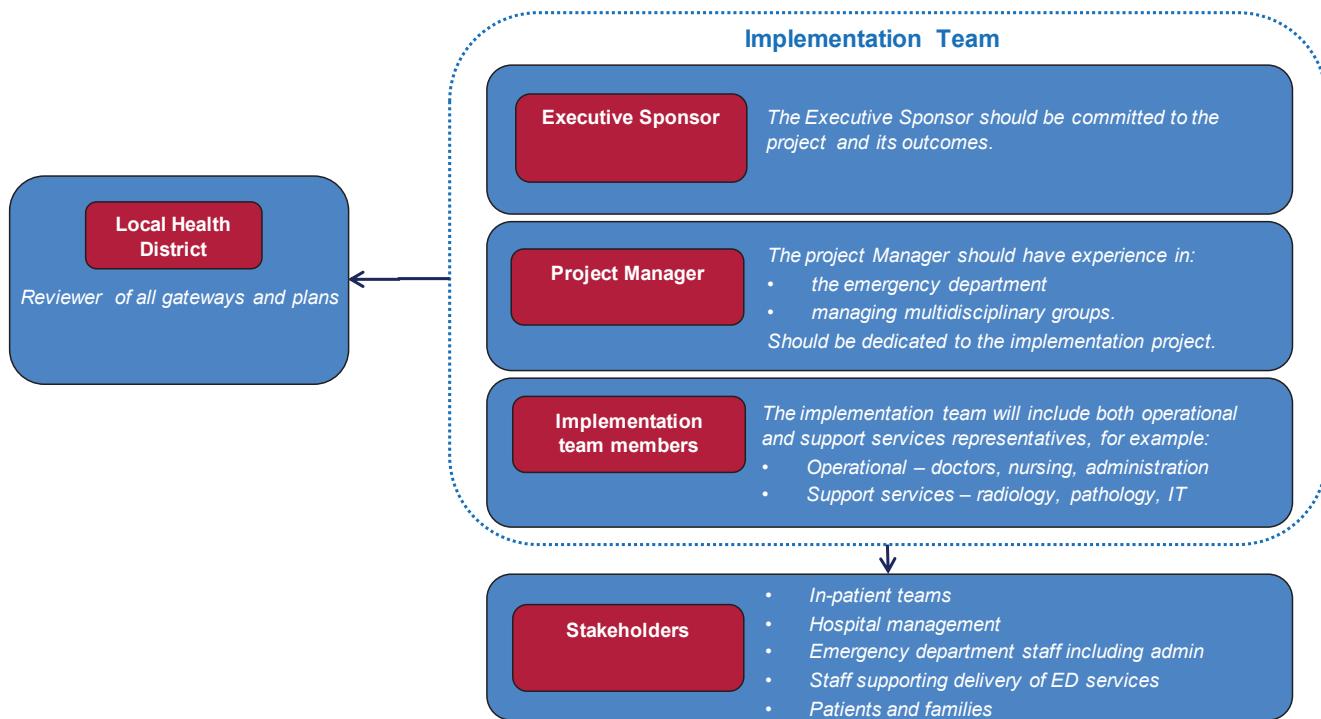
## Implementation Team

- The Implementation Team will be responsible for developing the ED SAS model and all activities to commence service delivery. You may want this to include people with specific expertise such as operational experience (e.g. doctors, nursing, and administration) and support staff (e.g. radiology, pathology, IT and facilities management). There may be clinical leaders who you think are important to be on this team, who can influence peers to support the implementation process. Team members will have the capacity and expertise to undertake discrete activities within the project, and produce documents or make initial decisions on the day-to-day workings of the ED SAS model.

## Stakeholders

- Stakeholders will consist of multiple groups of people with different roles to play in the project. They may include people who should be kept informed, people who will be participants in the process, or people who will be affected by the ED SAS model.

Figure 4: Example project structure



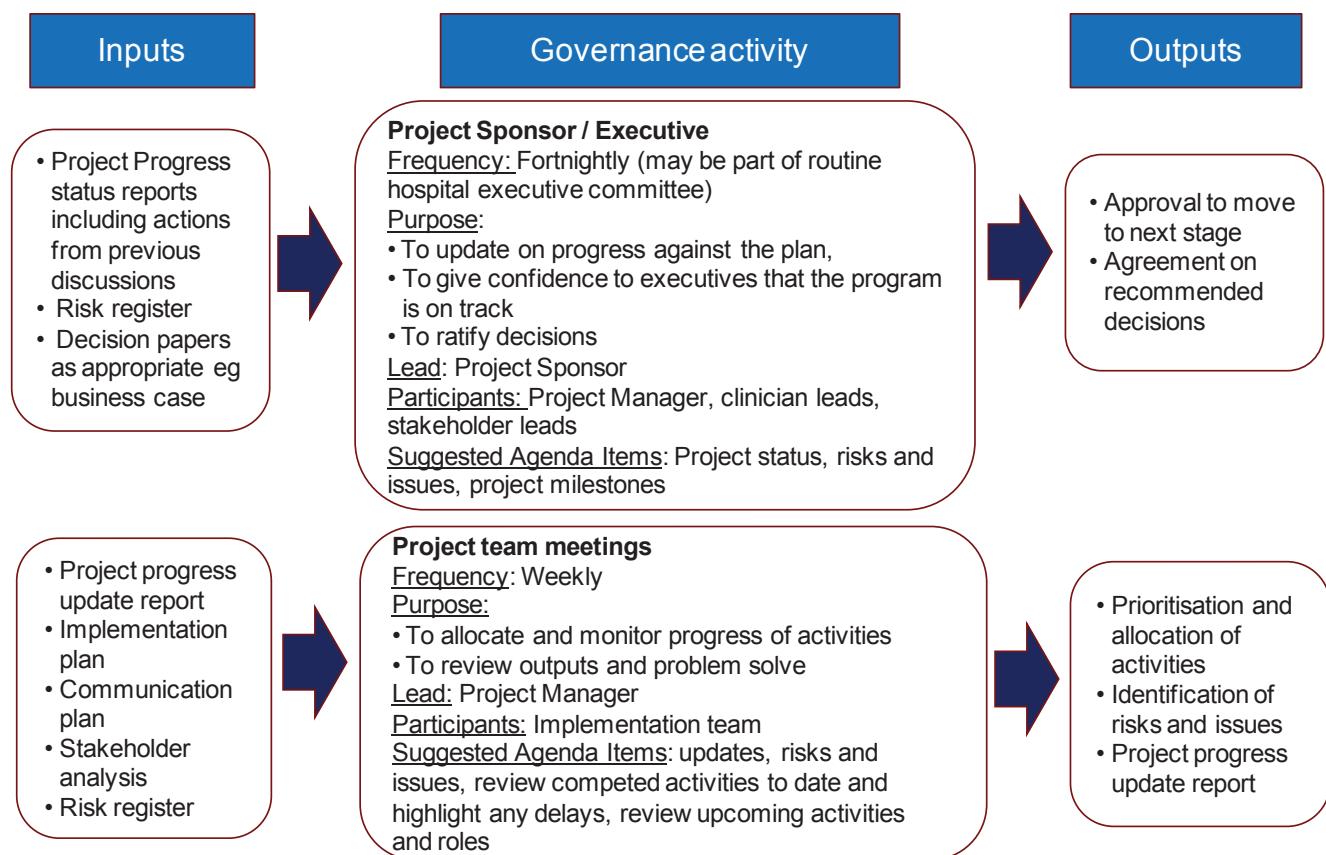
# Example of Project Governance Structure

## Purpose

To help manage, direct and understand who will be accountable for the ED SAS model being developed and implemented.

## When should I complete this?

At the beginning of Phase 3: Planning the operationalisation of the ED SAS model.



## APPENDIX C

# Example of Project Status Report

## *Purpose*

The project status report acts as a tracking tool to make sure the team and project are progressing on time against your established time frames at each stage. It also helps to highlight what risks could affect the progress of the project and how they can be resolved.

*When should I complete this?*

Fortnightly project progress updates are recommended.

## APPENDIX D

# Example Budget Template

### Purpose

Outline any budget requirements that may be incurred while establishing the ED SAS model.

### When should I complete this?

This should be completed on commencement of the project in Phase 1 and reviewed again in phase 3 when the operationalisation of the ED SAS model is confirmed and resource requirements understood.

Phase	Expenses	Total Costs
<b>Project initiation and management</b>	Project Manager Staff meetings Meeting expenses	
<b>Define and assess</b>	Meeting expenses (room, food and beverage) Focus groups Staff/departmental meetings Meetings Surveys	
<b>Designing ED SAS model implementation approach</b>	Redesign of facility costs Information Technology specialist's time Information Technology training time Equipment and its maintenance Additional staff costs Presentations at key meetings Article in the hospital newsletter Workshops	
<b>Implementation and Monitor</b>	Development of audit tools Data collection Data analysis and report	

## APPENDIX E

# Stakeholder Mapping Template

## *Purpose*

It is an essential part of any implementation project to identify individuals or groups likely to affect or be affected by the ED SAS model. A stakeholder mapping exercise will help identify your stakeholders according to their impact on the ED SAS model and the impact the ED SAS model will have on them. It can also highlight potential barriers to the project and facilitate the engagement of all relevant stakeholders in communications to improve their understanding of what you are trying to achieve. Identifying your stakeholder groups will feed into your communication plan.

The stakeholder map will allow you to track stakeholder engagement throughout the project, including who they are, when they need to be informed, and what requirements they need. Identifying those stakeholders that may be resistant to the ED SAS model during this activity will help feed into your risk register.

## *When should I complete this?*

It should be the first activity the implementation team undertakes in Phase 1. This activity should be completed with the Implementation Team and provided to the Executive Project Sponsor and LHD as part of the initial planning documents.

Stakeholder	Role in the implementation	Preferred method of communication	Preferred point of contact	Impact (H, M, L)	Attitude (+, -)
Name of individual or group	Are they a decision maker, someone who needs to be informed, an affected staff member, or are they involved in delivering the implementation?	Do they prefer email, hard copy, discussion etc	Who is their main contact within the Project Team?	How much influence do they have on the project?  H = high M = medium L = low	Do they have a positive or negative attitude towards the ED SAS model?  + = positive - = negative

## APPENDIX F

# Implementation Plan Template

### Purpose

To provide a step-by-step outline of each task in each phase in the implementation of the ED SAS model. It will outline who is responsible for each step and when the step needs to be completed by and highlight if there are any resources that will be needed to help the process.

### *When should I complete this?*

Should be completed in Phase 1 after you map your stakeholder.

Phase	Step	Tasks outlined	By who?	By when?	Resources needed?
<b>Phase 1: Project initiation and management</b>	1: Set up SAS implementation team and obtain executive support	Implementation team and executive project sponsor selected			
	2: Develop a budget to implement the ED SAS model	Establish what budget is need to implement the ED SAS model			
	3: Map and engage key stakeholders	Determine the stakeholders and the best communication method for each of the stakeholders			
	4: Develop an implementation plan	Determine how the project will be implemented within your ED			
	5: Establish a communication plan	Determine key messages, how often and method for communicating with each stakeholder group,			
	6: Develop a risk register	Determine the potential risks associated with the implementation project and mitigation strategies to address potential risks.			
<b>Phase 2: Define and Assess</b>	Case for change	Explain why there is a need and what are you trying to achieving by implementing the ED SAS model			
	1: Undertake a detailed data analysis and assessment of current ED service provision and demand.	Analysis of your ED data including activity and performance data			
	2: Qualitative data collection and analysis	Collect qualitative data from staff and patients about the current ED situation			

Phase	Step	Tasks outlined	By who?	By when?	Resources needed?
	3: Interpreting the data to determine the design of the ED SAS model best suited to your ED	Determine focus areas that would improve the ED and determine if the ED SAS model could help achieve these goals			
	4: Hospital and ED readiness	Determine what requirements are needed to implement the ED SAS model			
	5: Confirm the recommended ED SAS model for your ED	Confirm what outcomes you are expecting to gain from the ED SAS model			
	6: Define the objectives for change	Develop key reasons for why the ED SAS model will benefit your ED and what you expect to achieve from the model			
	7: Developing a business case	Complete your business plan template			
<b>Phase 3: Planning the operationalisation of the ED SAS model</b>	1: Define the processes and procedures that need to be documented for the ED SAS model	What are the processes and procedures that staff need to adhere to for a successful and safe implementation of the ED SAS model?			
	2: Confirm the ED SAS model clinical governance arrangements	Determine how the ED SAS model will be managed and who will be responsible			
	3: Confirm operational arrangements for the ED SAS model	How will the ED SAS model operate? e.g. operating hours etc			
	4: Determine the infrastructure and equipment needs for the ED SAS model	What layout, capital works and equipment is required for the ED SAS model?			
	5: Determine workforce needs for the ED SAS model	Organise staffing arrangements for the ED SAS model			
	6: Determine the Monitoring Measures needed	Determine what are the key performance indicators that the ED SAS model aims to effect and how the service will be monitored and evaluated			
	7: Revise the Implementation Plan	Implementation plan is reviewed			
<b>Phase 4: Implement and Monitor</b>	1: Trial model	Test the model in the ED for short periods of time			
	2: Evaluate the trial project	Assess how the ED SAS model performed			
	3: Confirm arrangements with support services	Finalise with support services such as medical imaging and pathology			
	4: Initiate communications and marketing launch with stakeholders and the patient community	Disseminate final communications before the official start date			
	5: Monitoring the change management	Monitor the implementation of the ED SAS model to facilitate a smooth and streamlined transition			
	6: Wind down the implementation team.	Wind down the team and establish a future point of contact for the ED staff			

## APPENDIX G

# Communications Plan

### Purpose

To help get the right message delivered to the right audiences at the right time. The communication plan is not your implementation plan; it is complementary to your implementation plan. The communication plan will help clarify:

- Project goals and objectives
- Key audiences, messages and communication channels
- Stakeholders roles in project
- That staff are receiving consistent information about the ED SAS model.

It is **essential** to have documented evidence that you have consulted with stakeholders. The communication plan provides this opportunity and will feed into your risk register.

### When should I complete this?

Once you have developed your implementation plan in Phase 1 and understand how the project will run, you can then develop the communication plan.

Communications plan template

Communication plan								
Project phase or activity	Who (stakeholder)	What (e.g. what is needed)	Purpose	Issue due date	Feedback due date	Channel (e.g. format)	Delivered by (e.g. group or person)	Who is responsible
Which phase or activity does this communication relate to in the implementation plan?	Which individual or group of people will receive this communication	What is the communication (e.g. a letter, an email, a poster etc)	What is the objective of the communication (e.g. to inform, to get a decision, to request information etc)	What date will the communication be circulated	If feedback (e.g. comments or a decision) is due, what date by?	What medium will you be using (e.g. email, post etc)	Who will this communication come from (e.g. does it have to be sent from the Project Sponsor etc)	Who is responsible for writing and producing the document?

# Example Newsletter Template

## Purpose

Communication is an essential part of any change project and communications can be delivered in many ways. A newsletter is an ideal way to communicate with staff, both internal and external to ED and will enable the development of a consistent message and updates to be disseminated. Printed materials are an effective way to communicate for clinicians and can be placed in locations such as staff areas and tea rooms.

The newsletter is easily updated and can be branded for your ED to make it readily identifiable as ED SAS project information. Newsletter can be prepared for different stakeholders modifying the message depending on your

target audience. You may choose to create a newsletter for internal ED staff which will be modified to disseminate more widely with other hospital stakeholders.

## ***When should I complete this?***

Newsletters should be prepared regularly (fortnightly or monthly) and should be timed around the key dates of your implementation project, e.g. on completion of your data analysis to broadcast what you have found and how you plan to implement your ED SAS model, and in the lead up to the date for officially commencing the model.

## Early ED Senior Assessment Streaming (ED SAS)



**What is ED SAS?**

The ED SAS model aims to streamline the front end processing of ED patients and will operate in the ED (close to triage) to improve time to assessment and flow of patients through ED. The model has two components:

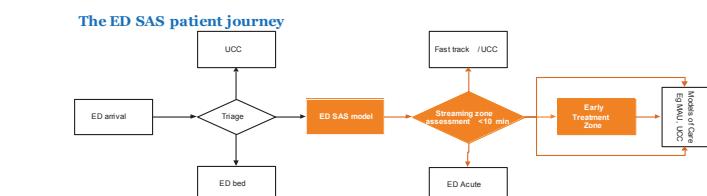
1. Streaming Zone – accepts patients from triage (categories 2-5 are suitable, preferably category 2 will go to acute). Patients will be assessed and given a provisional diagnosis by a senior ED medical officer steamed to appropriate care areas within or outside of the ED after diagnostics testing by the nurse.
2. Early Treatment Zone (ETZ) – Patients that require less than 2 hours of treatment can be treated in the ETZ. It will be monitored by a nurse.

**Why do we need an ED SAS model?**

Emergency Departments (EDs) are experiencing increasing pressure due to increasing patient presentations and emergency admissions. Presentations in all triage categories have increased by 21% since 2005, resulting in increased workloads and delayed access to emergency care. Other challenges in ED are:

- Delays in the patient being assessed by a senior decision maker (senior medical officer)
- Patients being placed into a bed on arrival regardless of whether their presentation requires a bed. This leads to subsequent bed block within ED rather than efficient use of beds.
- Increasing number of undifferentiated patients in the waiting room who are at risk of deterioration.

**The ED SAS patient journey**



The ED SAS is characterised by 3 key principles:

- Early senior assessment
- Early diagnosis
- Early streaming

**What will ED SAS achieve?**

- Remove the bottlenecks at Triage
- Early initiation of appropriate investigations
- Reduced time to appropriate treatment
- Early streaming of patients to appropriate MOC
- Improved patient and staff experience .

**When will it be implemented?**

The model will take three months to implement in our ED – we propose to be ready to start taking patients through the model by [dd/mm/2012].

**Who should I contact to find out more?**

The project officer responsible for implementation in your ED is [insert name].

An Implementation Team with hospital and ED representatives has also been convened to assist with implementation. Contact the project officer to find out who else is on the team for this important piece of work.

## APPENDIX I

# Risk Register Template

### Purpose

To highlight any risks early in the project that may jeopardise progress.

Typically a risk register contains:

- A description of the risk
- The impact of the risk, should it occur
- The probability of its occurrence
- A summary of the planned response, should the event occur
- A summary of the mitigation (the actions taken in advance to reduce the probability and/or impact of the event)
- Actions by (person accountable) and due date.

The template below is an example of a risk register.

Risk	Probability (1-5)	Impact (1-5)	Risk Score	Consequence	Mitigation	Action By	Due By
Enter description of the risk	This is scored out of 5 with 5 being the highest probability	This is scored out of 5 with 5 being the highest impact	This is a combined score of the probability and impact that allows a ranking of the risks	What will happen if the risk is not managed	What action needs to happen to mitigate against the risk	Name of accountable person	Date action required by
E.g. Anticipated patient volumes do not occur							
E.g. Services cannot commence within a X month period							
E.g. there is no physical space available in the ED to operate the model							
E.g. Staff are not committed to adopting this model as an alternative way of seeing and treating ED patients.							
<To be completed >							

## APPENDIX J

# Data Collection Template

### Purpose

To provide a template for you to gather all your ED data that is required to analyse your current ED activity and performance.

### When should I complete this?

This should be completed in Phase 2 when you are confirming your case for change.

Data requested	Hypothesis	Test/Action Plan (Analysis)	Data Source and Location	Sample Size	Who Will Collect the Data?	When Will Data be Collected?	Responsibility
Clear statement of the data field required	Hypothesis is a statement of cause and associated direction and magnitude of effect. This can be tested to determine if our hypothesis is correct or false. Use your root cause fish-bones to help generate one or more hypotheses for each issue.	Action plan identifies the testing logic required to test your hypothesis	Identifies source and location of required data	Clear reference to the time period data to be collected for.		Date the data has to be provided by	The member of the project team responsible for collecting this information
Activity per day	The ED has sufficient activity to support the ED SAS model	Analysis of ED patient presentations according to triage category and diagnosis	ED database	12 months	ED FirstNet/ data manager	Phase 2	Project Manager
Activity by time of day and day of week.	There are peak periods of day when ED presentations are suited to the ED SAS model	Analysis of ED patient presentations by time of day and day of week	ED database	12 months	ED FirstNet/ data manager	Phase 2	Project Manager

## APPENDIX K

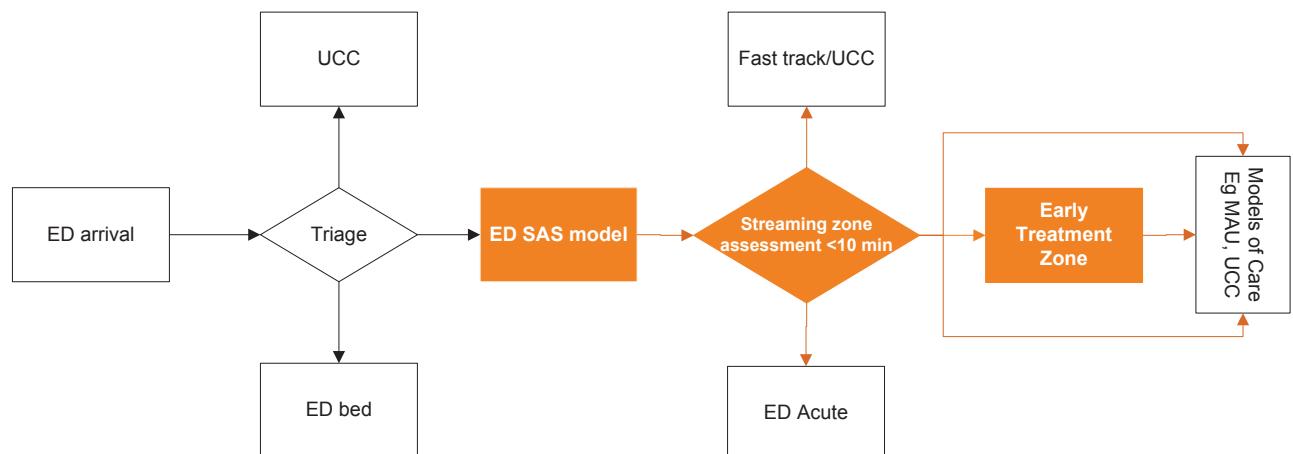
# Example Patient Pathway ED SAS

### Purpose

To demonstrate the patient journey with an integrated ED SAS model integrated, and the possible patient streaming options. You should process map a patient journey through your ED similar to the example below and highlight bottlenecks, delays and duplication in tasks/processes

### When should I complete this?

This should be completed in Phase 2 after you have undertaken a detailed analysis and assessment of the current ED service provision and demand.



## APPENDIX L

# Staffing Skills Matrix Template for SAS the Model

### **Purpose**

To determine if the current skill set of staff in your ED is capable of staffing the ED SAS model. If the model does not have the correct skill set and staff mix, it will be inefficient and ineffective.

### **When should I complete this?**

Mid way through Phase 3, after you have completed your governance and infrastructure and equipment needs. The Early ED SAS model of care document provides detailed descriptions of the requirements of each of the roles in the model.

#### **Clinical skills**

Based on the ED SAS model, how would you describe the core clinical skills required to staff this model?

<b>ED staff</b>	<b>Role in the ED SAS model</b>	<b>How will this be staffed? Indicate the number of staff, part-time, full-time, specialty, grade etc.</b>
ED staff specialist/ senior registrar or senior ED CMO		
Intern/JMO		
Streaming coordinator		
Registered nurses		
Enrolled nurses		
Other		

**Are there any challenges in coverage or skills that need to be addressed?**

**Is there sufficient coverage of senior staff with clinical skills required to operate the new model?**

**Are there any other considerations?**

## APPENDIX M

# Hospital and ED Readiness Template

### Purpose

To determine where your hospital and ED is placed in preparing for the implementation of the ED SAS model and to put in place mitigation strategies and enablers for project acceptance.

### When should I complete this?

This should be completed after you have analysed your ED data mid way through Phase 2.

Element	Question	Enablers	Barriers	Actions
<b>Leadership</b>	To what extent will the leaders in the ED apply the practice			
<b>Workplace culture</b>	To what extent are the principles of the model consistent with the values, attitudes and beliefs of the practice environment  To what degree does the ED culture support change?  To what extent are staff aware of the changes required of them for success of the model?			
<b>Commitment</b>	Do we have staff that are motivated, convinced of the model benefits and supportive of the new way of working?			
<b>Communication</b>	Are there adequate (formal and informal) communication systems to support information exchange relative to implementation?			
<b>Interdisciplinary relations</b>	To what extent do we have an effective multidisciplinary team environment in our ED to support the implementation of the ED SAS model?			
<b>Stakeholder engagement</b>	To what extent have all stakeholders been engaged and prepared for changes to their service delivery?			
<b>Availability of resources</b>	What physical spaces do we have available to use?  What equipment has been made available for use in the model?  Do we have sufficient numbers of experienced staff to facilitate the change?  Do we need to move staff from other areas to operate the model?			

## APPENDIX N

# Detailed Questions to Assist the Development of the Business Case

### Purpose

The following table provides a sample of the key questions that you should consider when completing your business case.

### When should I complete this?

This should be completed at the end of Phase 2 once you have finalised your case for change.

---

#### Data

Volume of ED presentation

- Establish peak ED volumes at specific times of the day and week.
- For each triage category:
  - Time to be seen
  - LOS
  - Off stretcher times
  - 4 hour targets
- Admission rates

---

#### ED Profile

- How many beds are there in the ED? (breakdown of acute, non-acute etc.)
- How many rooms are in the ED? (procedure rooms, plaster rooms, storage rooms etc.)

---

#### Workforce

Staffing for the ED SAS model

- How many of the following medical staff are currently employed? (FTE: Medical: Staff specialists, VMO, Registrar/ fellows, RMOs and JMOs, other)
- How many nursing staff are currently employed to staff the ED? (FTE: NM, NUM, ANUM, CIN, RN, EN, other) To what extent does specialisation of nursing staff within Emergency occur?
- What is the senior medical staff rostered cover like for peak ED periods and weekends? (weekdays 10am–10pm, weekends, other)

Clinical: Can the appropriate clinical skill mix required to safely operate the SAS be achieved?

- Is a senior medical ED staff specialist or Senior ED CMO or Senior registrar available to work in operating hours of the ED SAS model
- Can three nursing staff be allocated to the ED SAS model during its operating hours

---

#### Support Services

- Pathology: Are pathology services available to support the ED SAS model?
- Medical imaging: Are medical imaging services available to support the model?
- Clerical Support Staff: Are clerical support services able to support the model?

---

#### Processes and Procedures:

- Opening and closing the ED SAS model
- Functional bed capacity (see Early Ed SAS model of care document)
- Hand over when closing the ED SAS model
- Function of the Streaming Zone
- Function of the Early Treatment Zone

---

#### Barriers

- Are there any issues that may affect access to the ED SAS model? (e.g. medical, nursing, support services, bed availability?)
- Are there any other issues that may have a negative impact upon the ED SAS model?

---

#### Order and Priority

- What are the three key areas that impact on the capacity for the ED to expand, redesign or realign to accommodate the ED SAS model?

# Example Business Case Template

## Purpose

To justify the reason for initiating the ED SAS model and demonstrate the benefits it will have on your ED. It should detail the process that will be undertaken in establishing your ED SAS model.

## When should I complete this?

This should be completed at the end of Phase 2 once you have finalised your case for change.

**Note:** check for the existence of a preferred business case template used in your LHD before commencing.

### ED SAS model Redesign

### Business Case Template

#### Executive summary

The executive summary should be completed last

*<This should provide a summary of the introduction, background, rationale for change and objectives that are in the main body of the document.*

*Be sure to include information about the priority and importance of the project in the context of the Strategic Objectives of your facility, and the benefits to your facility of the redesign.>*

#### Options appraisal

*<Provide a brief summary of the options considered and the reasons for choosing the preferred option.>*

#### Costs and benefits

*<Summarise the main points and include sufficient detail so that your executive or approval committee can use this page as a ready reference.>*

## 1. Introduction

Project Name:

Project Sponsor/ Executive:

Project Manager:

## 2. Background

*<Provide a brief history of how the project came into being, and from where the authority and drive for it comes. Include background on the nature of the work conducted that explains why you want to take on the redesign. >*

### 2.1 Rationale for change

*<The rationale for redesign should be documented and referred to throughout the implementation process. Summarise why the status quo is not a model for the future and the benefits of the new model (qualitative and quantitative) in bullet points here>*

### 2.2 Objectives (SMART)

*<Based on the qualitative and quantitative data, determine objectives that include: the percentage improvement you will work towards achieving and the time within which you will achieve the objective. Using the SMART acronym will assist in setting aims that are specific, measurable, achievable, results oriented and time limited. >*

### **3. ED SAS model**

Outline the reason for implementing the ED SAS model

#### **ED SAS model -**

*<short description>*

#### **Benefits**

*<What will be the benefits of the ED SAS model for your ED >\*\**

---

#### **Disadvantages**

*<List any negative consequences of implementing the ED SAS model in your ED.>*

---

#### **Timescale**

*<Over what period will the costs be incurred and over what period will the benefits occur.>*

---

#### **Costs**

*<Summarise the costs and supporting assumptions associated with implementing the ED SAS model, including ongoing costs.>*

---

#### **Major Risks**

*<Provide a summary of the risks to implementation>*

---

### **4. Infrastructure changes (if applicable)**

*<State what action would need to be undertaken. Include an indicative timetable and justification for the proposed approach.>*

---

### **5. Project Strategy**

Key milestones and deliverables: *the key milestones will be presented in a table, as follows:*

Phase and Milestone	Deliverable	Date
<b>Project Initiation and Management</b>		
<ul style="list-style-type: none"> <li>■ Team set up</li> <li>■ Stakeholders engaged</li> <li>■ Communications plan</li> </ul>		
<b>Assess</b>		
<ul style="list-style-type: none"> <li>■ Case for change</li> <li>■ Quantitative data analysis</li> <li>■ Hospital and ED readiness</li> <li>■ Objectives for change</li> <li>■ Business case</li> <li>■ Project budget</li> </ul>		
<b>Designing the ED SAS model</b>		
<ul style="list-style-type: none"> <li>■ Document process and procedures</li> <li>■ Clinical and operational governance</li> <li>■ Infrastructure and equipment needs</li> <li>■ Staffing needs</li> <li>■ Performance indicators</li> <li>■ Implementation plan revisited</li> </ul>		
<b>Implement and monitor</b>		
<ul style="list-style-type: none"> <li>■ Trial of the model</li> <li>■ Evaluation of the trial</li> <li>■ Confirming the ED SAS model arrangements</li> <li>■ Initiate communication and marketing</li> <li>■ Collect and analyse performance data</li> <li>■ Wind down project team and other structures</li> </ul>		

## 6. Project management

### 6.1 Business case

<Write a brief statement on how this document will be kept up to date during the course of the project; that is, review points particularly where the expected scope, costs, benefits and savings figures are re-adjusted or confirmed.>

### 6.2 Governance

<This section outlines the project management structure that you will use to manage the project. Make sure you cover at least the following points:

- Who will oversee progress (e.g. executive sponsor, divisional head)
- Who will manage the project?
- How will the facility executive be kept informed of progress?

### 6.3 Risk management

<Check the organisational risk assessment tools and policy to undertake a risk assessment of each of the options>

### 6.4 Progress monitoring, evaluation and measures

<Enter here the mechanisms that you will establish to monitor and compare actual achievements against your baseline plan.>

Name:

Position: Project Manager

Signed \_\_\_\_\_

Name:

Position: Divisional Head

Signed \_\_\_\_\_

Name:

Position: Executive Sponsor

Signed \_\_\_\_\_

# Workforce Roles and Responsibilities

## Purpose

This should be used as a guide to highlight the roles and responsibilities of staff working in the ED SAS model.

## When should I complete this?

This should be referred to midway through Phase 3 after clinical and operational governance has been established.

Domain	Specific Role	Do in this role	Don't do in this role
Medical	<b>Streaming Zone In Charge (I/C)</b>  ED Staff Specialist preferred. Can be Senior Registrar or Senior ED CMO	Overall clinical, process and flow governance of model of care	Conduct procedures likely to take more time than prescribed 15 minutes
		Quick assessment and early streaming of patients - 10 minutes	Detailed clinical history, examination and documentation
		Risk stratification of patients to high, intermediate and low risk (e.g. ACS, sepsis)	Delay decision making as it will cause major disruptions to flow in ED
		Appropriate disposition decisions	
		Decision regarding early interventions (analgesia, antibiotics)	
		Risk stratification of patients to acute beds or waiting room	
		Supervising/guiding clinical guideline usage	
		Facilitate smooth flow of patients in collaboration with Streaming Coordinator	
		Document short impression/plan/progress	
		Communicate plan to relevant staff including expected patient journey	
Assistant Medical Officer	Junior Registrar/CMO/RMO	Conduct/ order investigations as requested by Streaming Zone I/C	Conduct/order investigations beyond requested by I/C without prior notification
		Documentation – clinical notes, plans, referrals, discharge summaries, GP/ Family discussions	Delay management decisions by not communicating with I/C regarding constraints
		Review – case progress, x-ray/ pathology results, specialist reviews	Conduct detailed medical assessments unless indicated by I/C to do so
		Communicate – progress of cases with I/C, inpatient specialty teams, medical imaging	
		Handover – handover cases being transferred from Streaming Zone/ETZ to respective clinical teams e.g. acute ED team, inpatient specialist team	

<b>Domain</b>	<b>Specific Role</b>	<b>Do in this role</b>	<b>Don't do in this role</b>
<b>Nursing</b>	<b>Triage Nurse</b>	<p>Determine chief complaint/presenting problem and thus patient priority.</p> <p>Establish patient acuity by assigning a triage category</p> <p>Allocate Triage Category 3, 4 &amp; 5 to Streaming Zone</p> <p>Limit Triage assessment to 5 minutes</p> <p>Facilitate speedy placement of patient into appropriate care area</p> <p>Communicate in a personable and professional manner with patients and carers regarding ED processes.</p>	<p>Collect complete patient histories and record routine vital signs at triage</p> <p>Create bottle necks with patients queuing to be assessed by the triage nurse</p> <p>Obtain patient information which will be collected minutes later by the Streaming team</p> <p>Ask routine assessment information such as allergies and lists of medication</p>
	<b>Streaming Coordinator</b>	<p>Maintain overall oversight/general management of the Streaming Zone &amp; front end operational processes in collaboration with Streaming Zone I/C</p> <p>Get involved in patient flow activities associated with acute care i.e. disposition from acute care</p> <p>Communicate in a personable and professional manner and negotiate for desired outcomes</p> <p>Ensure Streaming team maintain agreed timeframes - 5 minute triage - 10 minute Streaming Zone - 2 hours in ETZ</p> <p>Monitor Ambulance Off Stretcher Time</p> <p>Facilitate patient flow &amp; the referral of patients to suitable services following assessment, which may be external to the ED (e.g. MAU)</p> <p>Maintain electronic tracking of patients (e.g. FirstNet)</p> <p>Track patients in the Streaming Zone and waiting room who are awaiting placement in ED, waiting for specialty team review or awaiting admission under the care of an inpatient team.</p> <p>Monitor, report &amp; resolve bottle-necks in flow</p> <p>Support Streaming team in times of high activity</p> <p>Escalate changes in patient's condition through regular rounds of streaming areas &amp; waiting room</p> <p>Liaise with key ED roles: - Triage nurse - Streaming Medical I/C - ED clinical team - ED Nursing &amp; Medical I/C</p>	Get involved in individual patient care
	<b>Streaming Zone Nurse</b>	Work collaboratively with the ED team to reduce unnecessary repetition of assessment and diagnostics for patients.	Duplicate patient information that has already been obtained by the Streaming Medical team
	<b>Enrolled nurse or Junior ED Nurse</b>	Perform initial assessment in collaboration with the Streaming I/C. This may include but is not limited to the recording of vital signs, ECG, spirometry	Complete nursing documentation

Domain	Specific Role	Do in this role	Don't do in this role
		<p>Perform investigations/ interventions as outlined by the Streaming I/C assessment i.e. venepuncture, cannulation, point of care testing, These procedures/ interventions must take no longer than 10 minutes.</p> <p>Recognise procedures outside of this timeframe &amp; handover to ETZ nurse.</p>	Carry out nursing procedures that will delay patient flow through Streaming Zone
		<p>Establish and maintain communication pathways with key stakeholders in the Streaming Zone including the triage nurse, Streaming medical team, Streaming Coordinator and the ETZ nursing staff</p>	
		Communication with patients and carers regarding ED processes	
<b>Early Treatment Zone Nurse</b>		Implement the patient treatment plan documented by the Streaming I/C. Typically this involves symptom management (analgesia), initiating investigations and documented treatment modalities i.e. antibiotic therapy, splinting and analgesia together with focused patient observation and patient communication	Move patients out of the ETZ without completing the relevant nursing documentation and clinical handover.
		Ongoing review of patients to detect changes in clinical urgency and reassess the treatment initiated.	Get involved in lengthy nursing procedures, particularly during times of peak activity.
		Escalate concerns immediately to the Streaming I/C when indicated	
		Complete all relevant nursing documentation	
		Maintain length of stay of less than 2 hours	
		Prioritise patient management and initiate CIN protocols in accordance with local guidelines and policy. Assessment and management of patient's pain is a key priority	
		Hand over patient care to the appropriate caregiver when the patient is transferred out of the ETZ	
		Utilise a team approach to facilitate patient flow and reduce repetition in patient care	
		Establish and maintain communication pathways with ED key stakeholders	
		Ensure patients receive appropriate discharge/transfer of care information e.g. letters for GP or specialist, information about follow up appointments	
		Frequent communication with patients and carers	

## APPENDIX Q

# Monitoring Measures Template

### Purpose

To assist with evaluating the effectiveness of the ED SAS model by comparing pre and post ED performance data, and for ongoing monitoring.

### When should I complete this?

This should be completed at the end of Phase 3 just before you revise your implementation plan.

Type of monitoring measure	Explanation	Examples
<b>Operational Indicator</b>	Measuring the operational performance of the ED with the ED SAS model	<ul style="list-style-type: none"><li>■ Volume of ED presentation</li><li>■ Establish peak ED volumes at specific times of the day and week.</li><li>■ For each triage category:</li><li>■ Time to be seen</li><li>■ LOS</li><li>■ Transfer of Care times</li><li>■ 4 hour targets</li></ul>
<b>Clinical Indicator</b>	Relates to patient safety more specifically and measures the 'clinical management or outcome of care' of patients, such as morbidity and mortality rates	<ul style="list-style-type: none"><li>■ Clinical outcomes for high volume cases (e.g. chest pain etc)</li><li>■ LoS for index conditions</li><li>■ Did not waits and representations</li></ul>

## APPENDIX R

# Evaluation Plan

### Purpose

To help you determine the information you and your stakeholders require to evaluate the model and reduce time wasted from gathering information not useful to the project. It will also provide detail of who is accountable for each part of the evaluation process.

### When should I complete this?

Should be conducted after the ED SAS model has been piloted in Phase 4.

Step	Actions	By who?	By when?	Resources needed	Progress measures
<b>Identify the monitoring processes</b> <ul style="list-style-type: none"><li>■ Qualitative and quantitative</li><li>■ Establish baseline</li><li>■ Set measures to monitor progress</li></ul>	Example: Gather baseline data before launch date				
<b>Frequency and timing of data collection</b> <ul style="list-style-type: none"><li>■ How, when, where will data be collected</li></ul>	Example: Collect ED SAS model data weekly				
<b>Feedback schedule</b> <ul style="list-style-type: none"><li>■ Level of feedback</li><li>■ (Individual, team, organisation)</li><li>■ Data comparisons</li><li>■ Timing and frequency of feedback</li><li>■ Method of feedback (presentations, email, etc)</li></ul>	Example: Display progress and changes compared to baseline Monthly update to exec Have data displayed in ED for staff to see the benefits				
<b>Celebrate short term wins and plan for celebration to mark milestones.</b>	Examples: Spread results throughout the ED with FYI email Article in patient and staff newsletter				

Source: Adapted from: The OSSIE Toolkit (2010)

## APPENDIX S

# Lessons Learnt Template

### **Purpose**

The purpose of this template is to capture any lessons learnt or key success factors that you encountered during your experience of implementing the new ED SAS model.

### **When should I complete this?**

You should make a note of these at the end of each phase as you progress through the project. Remember that there will be other organisations who will be undertaking this project after you have completed yours, and could benefit from your reflection and advice on how you could have done things differently.

### **Who should I share this with?**

Send the completed template to NSW Ministry of Health so that this can be shared with other sites undertaking redesigning of their ED SAS model.

What did you learn?	What would this change in how you approached or ran your implementation?	Who should hear about this?	Who can people contact to find out more?	Attach any relevant documents or material
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## APPENDIX T

# Team Debrief Template

### **Purpose**

To reflect on what worked well, the challenges and how to improve future projects. You may want to hold it at a venue external to the organisation, and run it formally or informally. Make sure that everyone has a chance to speak and be listened to.

### **When should I complete this?**

A team debrief is usually held at the end of a project, and used to reflect upon what worked well, and what could be done differently if undertaking a similar task. You can also hold feedback and debrief sessions with your team as you progress through the project phases.

### **Suggested agenda**

- 1      Welcome and ground rules for discussion.
  
- 2      A look back over the project – What have we achieved?
  - ✓ What worked well?
  - ✓ What could we have done differently?
  - ✗ Summarise Actions Agreed (if any).

What did you learn?	What would this change in how you approached or ran your implementation?	Who should hear about this?	Who can people contact to find out more?	Attach any relevant documents or material
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## APPENDIX U:

# Case Study - Westmead Hospital SAFE-T Zone Model

### Purpose

The case study presented below has been provided to demonstrate the successful implementation and the benefits derived from the SAFE-T Zone model.

#### SAFE-T Zone Model of Care - Westmead Hospital – Sydney, Australia

Westmead is one of the largest public hospitals in Australia and is internationally recognised for quality teaching and research. Each year Westmead; treats more than 55,000 people in the emergency department, has approximately 83,000 patients stay at least one night in hospital, performs over 14,000 surgical procedures, provides more than 1.3 million outpatient services and assists with the birth of more than 4,600 babies. Westmead is part of the Western Sydney Local Health District.

#### SAFE-T Zone Model of Care

In response to increasing pressures in the ED and overcrowding in the waiting room, Westmead Hospital Emergency Department developed an innovative way to overcome these challenges.

Recognising the potential risk to undifferentiated patients waiting for long periods of time, duplication of assessment tasks and the associated workloads for staff, a model of care was developed to facilitate an earlier, rapid senior medical assessment and earlier access to treatment and diagnostics, and the streaming of patients to the most appropriate care setting.

The SAFE-T Zone model is designed to be flexible and operates at peak periods in the ED. This model relies on having a senior decision maker (ED Consultant or Registrar) to perform 10 minute assessments on new presentations to ED, using a target timed approach. The multidisciplinary model is designed to streamline the front end processes and keep the acute beds available for those patients most in need. Utilising experienced medical and nursing staff in the model promotes rapid triage and enables the timely risk stratification of common presentations, e.g. chest pain, fever and the initiation of time critical interventions.

There are no patient exclusion criteria for the model and it promotes unidirectional flow, so once assessed, the patients are streamed into the Early Treatment Zone, another part of ED, or referred to another model of care or inpatient unit for further treatment.

#### Outcomes

Westmead ED completed a 3-month trial of the model. Findings included:

- Ability to see more patients in the same amount of time and with same resources
- Improvement in Off Stretcher Time (OST)
- Improvement in time to first seen across all triage categories
- Improvement (reduction) in DNW rate when SAS model operating, this was not significant across all hours.
- Reduced length of stay for admitted and discharged patients – significant changes seen in categories 3 and 4.
- As the patient waits for triage, medical assessment and treatment times are shorter.
- Nursing workloads at triage have been reduced
- Nursing observations and interventions occurred more frequently and promptly.
- There was a reduction in the number of patients being treated in the public corridor and informal treatment spaces - patients kept in corridors typically suffered discomfort and experienced a lack of privacy and dignity in the delivery of care.

#### Conclusions

The SAFE-T Zone model resulted in a decreased length of stay for ED patients, particularly for ATS categories 3 and 4 – these are known to be categories with the worst performance in times seen and LOS.

Westmead ED has seen positive results despite access block and hospital bed occupancy rates worsening and despite an increase in the number of ED presentations.

Using the multidisciplinary approach, staff have reported better team work in providing patient care with this model. Staff relationships have flourished and there is a perceived improved collegiality among the ED nursing and medical staff since adopting this model.

Establishing a unidirectional flow has improved the patient experience as patients perceive their progress and care to be improved.

