



National Leadership and Innovation Centre



National Emergency Medicine Programme

Assessing, Diagnosing and Treating Your Emergency Department

The Path Forward

June 2013

Contents

1. Introduction	1
2. Assess Your Emergency Department.....	4
2.1 Purpose	4
2.2 Patients	5
2.3 Professionals.....	11
2.4 Process.....	18
2.4 Process.....	18
2.5 Patterns.....	22
2.6 Metrics that Matter	26
3. Diagnose your Emergency Department.....	30
4. Treat your Emergency Department.....	32
5. Follow-up.....	37
Appendix 1: Data Sources and Owners	38
Appendix 2: EMP Recommended Improvement Themes	39
Appendix 3: References.....	40

Material in this document relating to Clinical Microsystems has been adapted from the Clinical Microsystems Workbook “Assessing, Treating and Diagnosing your Emergency Department” and other Clinical Microsystem resources with permission from Ms Marjorie M. Godfrey MS, RN, Prof Eugene C Nelson DSc, MPH and Prof Paul B Batalden at The Dartmouth Institute for Health Policy and Clinical Practice, Dartmouth Medical School, Hanover, NH, USA. We have developed this workbook with tools to give ideas to those interested in improving Emergency Department patient care. The Dartmouth Institute for Health Policy and Clinical Practice and the developers of this workbook are pleased to grant use of these materials without charge, providing that recognition is given for their development and that the uses are limited to an individual’s own use and not for re-sale.

1. Introduction

Strategies for improving the place where patients, families and clinical teams meet.

A Microsystem Self-Assessment, Diagnosis and Treatment Plan.

1.1 Background

The National Emergency Medicine Programme Report provides a strategic approach to improve safety, quality, patient access and value in emergency care in Ireland. Now the EMP sets to work with ED teams to deliver programme recommendations and quality improvement where it really matters - where patients and clinical teams meet.¹ The Clinical Microsystem improvement model was developed at the Institute for Health Policy and Clinical Practice, Dartmouth College, USA^{1,2} and was further evolved through work in Sweden.³ Further information and resources are available at <http://www.clinicalmicrosystem.org>.

The EMP selected the Clinical Microsystem approach to be the overarching methodology to guide quality improvement in EDs in Ireland because it is a pragmatic and intuitive improvement approach that has been used to good effect in the ED setting.^{4,5} It places the patient-clinician interaction at the core of all quality improvement activity and its methodology can be easily adapted for use in different types of EDs. The purpose of this document is to support Emergency Department (ED) teams in using the Microsystems approach to better understand the care needs of the patients they serve and to assess how their EDs work, so that they can start to improve the quality of patient care they provide. It is through improvement at ED level that the aims of the EMP will be realised for patients.

1.2 Clinical Microsystems

A clinical microsystem is the front-line unit that provides health care and is described as "*a small group of people (healthcare providers, patients and their families) who work together in a defined setting on a regular basis to create care*".¹ The patient is central to every clinical microsystem but microsystems also include support staff, processes, technology and recurring patterns of information, behaviour and results.¹ Multiple microsystems contribute to form mesosystems (e.g. hospitals or Emergency Care Networks) and macrosystems (the health service or the National Emergency Care System).

The clinical microsystem is where care is "made". It is at this level that quality, safety, reliability, efficiency and innovation are created along with staff morale and the patient experience. All other components of the health system exist to support the clinical microsystem.¹

1.3 The Clinical Microsystems Improvement Approach

The microsystem is where strategy and vision are translated into patient care; it is the linkage between vision and delivery.⁵ Highly performing Microsystems are characterised by patient focus, outcomes, performance and process improvement, intelligent use of information and technology, leadership, culture and staff development.¹ The Clinical Microsystem approach aims to improve the quality of patient care and the work-life of all staff who contribute directly or indirectly to patient care. It recognises that improvement occurs in the unique context of each ED, where context includes factors such as culture, pre-existing processes and infrastructure.¹ It also emphasises the importance of 'reaching out' from each microsystem to other services and specialties to improve pathways of patient care.

1.4 Clinical Microsystems Integrate Improvement in Front-line Work

Clinical Microsystems leaders advise that "finding time to improve care can be difficult, but the most effective way to improve and maintain quality, safety, efficiency and flexibility is by blending analysis, change, measuring and redesigning into the regular patterns and the daily work habits of front-line clinicians and staff."⁴ Without intelligent and dedicated improvement work by all staff in all units, the quality, efficiency and pride in our work will not be made nor sustained.^{1,2,4}

1.5 Five Steps to Improving your Emergency Department

Clinical Microsystems provide an approach to understanding and improving care that every ED clinician will recognise – Assess, Diagnose and Treat your ED. The approach involves five steps:

1. Organise a lead team to drive and coordinate improvement;
2. 'Make an Assessment' of your ED using the 5 'Ps' (Purpose, Patients, Professionals, Processes, Patterns) and Metrics that Matter;
3. 'Make a Diagnosis' and identify areas for improvement; this step encompasses complimentary improvement methods including Lean improvement tools;
4. Plan and commence improvement – 'Treat your ED'; Plan-Do-Study-Act (PDSA) cycles are used to put improvements in place;
5. Follow-up and evaluate in a continuous improvement cycle that is embedded in the day-to-day work of your ED.

Step 1: Setting up a Lead Team

EMP Improvement Teams should be established and should meet at least weekly, to maintain focus, make plans and oversee improvement work. Departmental update meetings should be held monthly and should involve as many ED staff members as possible. It is important to inform the entire ED team of improvement progress. Various communication methods should be explored to ensure maximum staff involvement regardless of roles or shift patterns; these may include email, newsletters, notice boards or other media.

Step 2: Assessment:

This step follows a data analysis approach and recommends using the 5 'Ps' to assess the current profile of your ED: Purpose, Patients, Professionals (staff), Processes and Patterns (in your daily activities). "Metrics that Matter" are used to track ED performance on an on-going basis. This phase also involves reviewing baseline ED activity data. Patient experience data is a key component of assessing your ED. Assessment results should be used to prioritise local improvement activity, generate ideas and track progress. It may take up to 4 or 6 weeks to gather the necessary data and to use the recommended analytical tools. Not all EDs will need to use all the tools as ED Information Systems (EDIS) may provide some of the data required. The assessment method should be customised for use in each ED.

Step 3: Diagnosis

"Diagnosing" your ED includes identifying and prioritising the improvements required for each ED. These should be consistent with national EM strategy (i.e. the EMP) and with the strategic priorities of your hospital. Each ED should have a clear statement of what needs to be improved, what outcomes are expected and a prioritised list of what improvements will be tackled and when. Lean approaches can be used to diagnose areas for improvement in the ED and other approaches such as Six Sigma and Demand/Capacity Modelling are also effective in the ED setting.¹¹ The *Clinical Microsystems at a Glance* booklet provides an introduction to some of these methods.¹²

Step 4: Treat your ED

Different improvement science methods are selected according to the type of improvement project needed in each ED. These most commonly used methods are Plan Do Study Act (PDSA) cycles.

Step 5: Continuous improvement

Quality improvement in healthcare is a continuous journey. The effects and outcomes of improvement activity should be monitored within each ED. Each ED team should encourage new ideas for improvement and have a system in place to prioritise and coordinate new improvement work-streams. It may take time to build improvement momentum at each ED but eventually quality improvement activity will become self-sustaining and embedded in the daily actions of each ED team. A continuous improvement cycle will develop as measurement and outcomes analysis contribute new knowledge and ideas. Improvement will be achieved within the unique context of each ED and each unit will contribute to better patient care across the emergency care system.

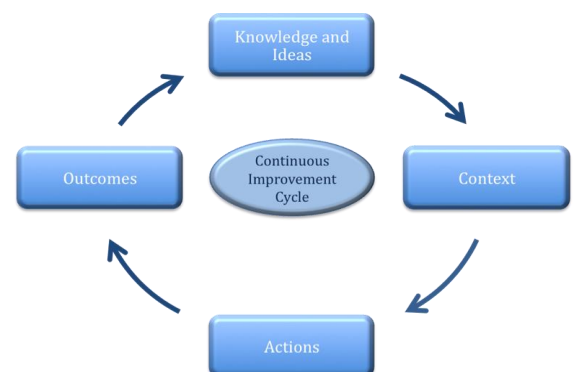


Figure 1: The Continuous Improvement Cycle

2. Assess Your Emergency Department

The ED Assessment uses the '5Ps': Purpose, Patients, Professionals, Processes and Patterns. Assessment results will inform decision-making around EMP improvement priorities. A Data Review Sheet (Appendix 1) provides a template to list which data can be retrieved from current systems and which data need to be measured through the analytical tools provided. Keeping a record of data sources and owners will also facilitate repeat studies to be undertaken when required.

2.1 Purpose

2.1.1	<p>Start by defining the "Purpose" of your ED.</p> <p>Why does your Emergency Department exist? Raise this question to EVERYONE in your department to create the best statement of purpose that everyone can own.</p>
<p>The purpose ofEmergency Department is:</p>	

Emergency Department Profile

A. Purpose: Why does your department exist?

Date:

Administrative Lead:

ED Nurse Lead:

Consultant in EM Lead:

B. Know Your Patients: Take a close look into your ED to create a "high-level" picture of the PATIENT POPULATION that you serve.

Age Distribution of Pts:			List Your Top 10 Diagnoses/Conditions		Patient Experience		Comments/Data	
Birth-2 yrs	3-16 yrs	%	1.	6.	Arrival/reception			
16-65 years			2.	7.	Comfort/privacy			
66-80 years			3.	8.	Kindness, dignity, respect			
80+ years			4.	9.	% 6-hr ED discharges			
% Females			5.	10.	% 6-hr admitted patients			
Triage Acuity	Average time to clinician (mins)	%*	Discharge Disposition		Patient Population Census		# ED	Y/N
T1			Home		Do these numbers change by season? (Y/N)			
T2			Admission		Average number pt arrivals per hour			
T3			Nursing home/residential care		Average number pts per day			
T4			Other Hospital		Average number pts per week			
T5			Died in ED		New patients in past year			
* % = percentage of pts in each triage category			Living situation		Scheduled Return rate			
			% Patients who live alone		Unscheduled Return rate			
			% Pts living with others/residential		# days off-call per month			
			% Pts who are homeless/ in hostels		# days ED overcrowded per month			
					Mortality Rate for ED attendances			

C. Know Your Professionals: Use the following template to create a comprehensive picture of your department. Who does what and when? List all roles, total WTEs and Over-Time by role. Add roles not listed.

Current Staff	Day WTEs	Evening WTEs	Night WTEs	Weekend WTEs	Overtime hours by role per week	Supporting Diagnostic Departments	
Staff Nurse Total						(e.g. Imaging, Lab, Cardiac investigation)	
CNMs Total							
ANPs Total							
Consultants Total							
Middle Grade Drs Total							
SHOs Total							
Interns Total							
Medical Social Workers							
Therapists							
Receptionists							
Other Administrative staff							
Others:						Staff Satisfaction Scores	%
Do you use medical locum staff?	_____ Yes	_____ No	How stressful is the department?			% Not Satisfied	
Do you use nurse agency/bank?	_____ Yes	_____ No	Would you recommend it as a good place to work?			% Strongly Agree	

***Each staff member should complete the Personal Skills Assessment and "The Activity Survey"**

D. Know Your Processes: How do things get done in the microsystem? Who does what? What are the step-by-step processes? How long does the care process take? Where are the delays? What are the "between" Microsystems hand-offs?

1. Create flowcharts of routine processes.	Do you use/initiate any of the following?	ED capacity	# Stretchers _____
a) Overall ED assessment & treatment process	Check all that apply	Clinical Decision Unit	# Rooms _____
b) Inpatient admission process	<input type="checkbox"/> Order Sets	Helicopter pad on site?	Yes No
c) Care process for ambulatory pts (eg Fast-Track)	<input type="checkbox"/> Care Pathways	Linking Microsystems	
d) Process for pt handover at end of ED shifts	<input type="checkbox"/> Rapid Assessment & Treatment	(e.g. Pre-hospital, ICU, Inpatient Units, Operating Theatres)	
e) ED Discharge process	<input type="checkbox"/> ANP streaming		
f) Transfer to another hospital process	<input type="checkbox"/> Fast-Track streaming		
g) Reporting of adverse events	<input type="checkbox"/> Bedside Registration		
h) Major trauma call process	<input type="checkbox"/> Electronic Patient Tracking		
i) Patient 'alerts' processes e.g. child protection	<input type="checkbox"/> Website for Patients/other info.		

2. Complete "The Core and Supporting Process Assessment Tool"

E. Know Your Patterns: What patterns are present but not acknowledged in your microsystem? What is the leadership and social pattern? How often does the microsystem meet to discuss patient care? Are patients and families involved? What are your results and outcomes?

• Does every member of the department meet regularly as a team?	• Do the members of the department regularly review and discuss safety and reliability issues?	• What have you successfully changed?
• How frequently?		• What are you most proud of?
• What is the most significant pattern of variation? E.g. turnaround times (labs, specialities), triage times, variation in treatment of sub population or disease?		• What is your financial picture?

F. *Complete "Measures that Matter"

Use this table to **summarise** your ED's profile – the data can be collected through the following exercises.

2.2 Patients

Gaining insight into the profile of patients who attend your ED provides very useful information for the design of processes and services. Patients themselves provide valuable insights into the quality, efficiency and experience of care provided in your ED.

Knowing your Patients includes:

- ED Profile Data – identifying the population your ED serves
- Patient Presenting Conditions
- Assessing patients' experiences of care in your ED (Tools 2.2.1 and 2.2.2)

ED baseline activity data that have been previously compiled for the EMP should be reviewed at this point.

ED Profile Data:		
Item	Descriptor	Data
2.2.1	What is the gender profile of your ED patients?	Male: female = :
2.2.2	What is the daily attendance profile of your ED patients - how many patients attended and when? Average morning/afternoon attendance: Average evening attendance: Average night-time attendance:	_____ patients on average per day 08:00 to 16:00: _____ patients per day 16:01 to 00:00: _____ patients per day 00:01 to 07:59: _____ patients per day
2.2.3	Total number of new patient ED attendances – per year	_____ new patients
2.2.4	Number of scheduled return ED attendances	_____ scheduled return patients
2.2.5	Number of unscheduled return ED attendances at 7 days and at 28 days	_____ unscheduled returns at 7 days _____ unscheduled returns at 28 days
2.2.6	Does patient attendance vary by season?	Y/N
2.2.7	Number of Patient Attendances by Hour	_____ Patients
2.2.8	Number of patients by day of week	_____ Monday _____ Tuesday _____ Wednesday _____ Thursday _____ Friday _____ Saturday _____ Sunday
2.2.9	Number of patient attendances by week	
2.2.10	Number of patient attendances by month	

2.2.11	Number of patient attendances by year	
2.2.12	ED overcrowding – how many patients were documented as waiting for inpatient admission in the ED per month in past year?	
2.2.13	Mortality Rate	
2.2.14	Patient Attendances by Triage Category	<input type="text"/> 1 <input type="text"/> 2 <input type="text"/> 3 <input type="text"/> 4 <input type="text"/> 5
2.2.15	Living arrangements: What % of your patients	<input type="text"/> Live alone <input type="text"/> Live with others/in residential/nursing care <input type="text"/> Are homeless or live in hostels
2.2.16	Discharge Disposition %	<input type="text"/> Home <input type="text"/> Medical Assessment Unit <input type="text"/> Medical Admission, other. <input type="text"/> Paediatric Admission <input type="text"/> Critical Care Admission <input type="text"/> Surgical Admission <input type="text"/> Other hospital <input type="text"/> Died in ED

Other Activity Drivers:

2.2.7	Does your ED serve particular populations associated with higher demands for emergency care?
2.2.8	Other patient factors influencing demand for your emergency service? <i>E.g. data indicating social deprivation rates in your catchment population; city-centre location?</i>
2.2.9	Does your ED provide additional emergency services for patients? <i>E.g. pre-hospital support; maritime support?</i>

Patient Presentations:

2.2.10 What are the 10 most frequent presenting complaints to your ED?

2.2.11 What are the 10 most frequent disposition diagnoses in your ED?

Patient Experience:

2.2.12

1. Review any recently completed analysis of patient experience in your ED or
2. Use the patient experience tools mini-survey provided (Appendix 2.1) and
3. Review a sample of recent patient feedback to your ED – complaints and compliments and
4. Conduct a “Through the Eyes of Your Patient” survey.
6. Review patient experience data –
 - How did patients rate their experiences in your ED?
 - Are kindness and consideration evident? *
 - What do the data tell you about respect for patients’ privacy, dignity and autonomy in your ED?*
 - What do the data tell you about patient comfort in your ED?
 - Did the patients surveyed experience delays to care? How long did they wait?

Identify any areas for improvement revealed by these exercises.

** National Standards for Safer Better Healthcare – Patient-Centred Care and Support.*

2.2.1 Patient Experience Survey

A staff member should ask a small number (e.g. <10) patients to complete a survey form. Patients may require help with literacy, vision or language problems. Note any areas for improvement identified in the patient's reports. Repeat the survey according to local need.

Patient Experience Survey

1. Did someone speak to you and provide help as soon as you arrived in the Emergency Department?

Initial contact was: Excellent Very Good Good Fair Poor

2. How would you rate your experience with the length of time you waited today?

Excellent Very Good Good Fair Poor

3. Was your privacy respected at all times during this visit? Respect for privacy was:

Excellent Very Good Good Fair Poor

4. Were your comfort needs met? (e.g. were you given a suitable place to lie down, sit, access to toilets, drinks, food etc.) The ED team's management of patient comfort needs was:

Excellent Very Good Good Fair Poor

5. Did all the people you met here treat you with courtesy and have a friendly, helpful attitude?

How would you rate their attitude to you:

Excellent Very Good Good Fair Poor

6. How would you rate your overall experience today?

Excellent Very Good Good Fair Poor

7. What would make this Emergency Department better in your opinion?

.....

8. Time arrived at Department _____ Time Left Department _____

Thank-you for completing this survey. Please feel free to provide additional comments overleaf or to talk to a member of staff about any issues you may wish to discuss.

2.2.2 Through the Eyes of Your Patient

Through the Eyes of Your Patient

A simple way to understand the experience is to shadow a patient/family through the process of care.⁴ Enrol objective members of the organization's staff (consider elective students, nursing or medical students or a staff member from another department.) to walk with and "shadow" a patient as they experience care in your practice. This form can be used to document the experience. You can also capture the patient experience by making an audio or videotape.

Tips for making shadowing more effective:

1. Determine with your staff where the starting point and ending points should be, taking into consideration making the decision to attend the ED, getting to the ED, the actual ED visit process, follow-up arrangements and other processes.
2. One member of the staff should follow the patient and family member throughout the visit
3. Set aside a reasonable amount of time to experience the patient journey. Consider doing multiple experiences along the patient journey at different times.
4. Observe the steps in the process as they happen including how long each step takes.
5. Note who comes in contact with the patient at each step along the way.
6. During the experience record and understand the patient's and family's reactions to what happens at each step. Record first hand patient concerns, questions, comments and complaints. What was frustrating? What was gratifying? What was confusing? Again, an audio or video tape can be helpful.
7. Debrief your staff on what you saw, heard and learned.

Date:		Staff Shadower:
Shadowing Begins When:		Ends When:
Time:	People Met:	Concerns, questions, comments, complaints:

Recommendations from Staff Shadower on the basis of this exercise:

2.3 Professionals

2.3.1 Introduction

Appreciating the perceptions, motivations, skills and talents of your ED team is key to developing improvements that enhance the working lives of ED team members as well as improving patient care. Developing each member of the ED team is a key to success for staff and the microsystem (ED). Understanding how each team member spends his or her time at work is important to ensure improvement towards having the right patient cared for by the right person at the right time.

Professionals:	
2.3.1.1	Review the list of the Professional/Staff Groups who are employed within your ED. <i>This data should be available in your reply to the EMP ED Staff and Infrastructure Surveys.</i>
2.3.1.2	How is your team deployed? <i>Describe usual staff rosters in your ED – how many staff on each shift.</i>
Nursing: Day-time shift on weekdays: hrs to hrs Nursing Lead / ADON / CNM 3: CNM 2s: CNM 1s: Staff Nurses: Advanced Nurse Practitioners: Clinical Nurse Specialists: Health Care Assistants: Other roles: Evening/Nights Monday to Friday: hrs to hrs CNM 2s: CNM 1s: Staff Nurses: Advanced Nurse Practitioners: Clinical Nurse Specialists: Health Care Assistants: Other roles: Differences at weekends:	Medical Staff: Day-time shift on weekdays: hrs to hrs Consultants: Middle Grades: BST/SHOs: Interns: Other medical staff: Evenings on weekdays: hrs to hrs Consultants: Middle Grades: BST/SHOs: Interns: Other medical staff: Nights Monday to Friday: hrs to hrs Middle Grades: BST/SHOs: Differences at weekends:
Nursing agency / bank and nursing overtime requirements per week?	Medical locum staff required per week?
Therapy Professions, Medical Social Workers and support staff: Day-time shift, weekdays: hrs to hrs Evening/Nights, weekdays: hrs to hrs Access at weekends:	Administrative Staff: Day-time shift, weekdays: hrs to hrs Reception / ward clerks: Secretarial / business etc: Evening/Nights, weekdays: hrs to hrs Differences at weekends:

Professionals (continued):	
2.3.1.3	Who are the Ambulance Services personnel who bring patients to the ED? Are there areas for improvement in how your ED team interfaces with pre-hospital care colleagues?
2.3.1.4	Consider how many colleagues from other departments, specialties and services contribute to patient care in the ED. This will highlight how many non-ED staff members need to be consulted or informed regarding future changes in your ED. Estimate how many specialty teams and how many individual on-call team doctors, non-ED Clinical Nurse Specialists and other staff provided patient care in your ED in the past month.
Summary comment:	
2.3.1.5	Analyse ED team members' work activities: <i>What do we spend our time doing at work? Invite some colleagues to complete the staff activity analysis and identify ways to eliminate activities that do not contribute, either directly or indirectly, to patient care and staff wellbeing.</i>
Summary comment:	
2.3.1.6	How do your team members rate working in your ED? <i>Suggest doing an ED team survey.</i>
Summary comment:	
2.3.1.7	Profile ED team members' skills and development needs: <i>If your ED has not recently completed an assessment of staff skills or training needs you should undertake one, as developing team competencies and skills is essential to achieving the best patient outcomes and developing a highly performing system of emergency care. The EMP will develop a template for assessing nursing team competencies and learning needs. The Consultants in EM should review how the professional development needs of the medical team are being met. The ED management team should plan the ongoing professional development of the ED team.</i>
Summary comment:	

2.3.2 Staff Satisfaction Survey

Staff Satisfaction Survey

Ask all ED team members to complete this or a similar survey. Provide an appropriate place for staff to return survey forms.

1. Everyone who works in this ED treats me with respect at all times.

Strongly Agree Agree Disagree Strongly Disagree

2. I am given everything I need (e.g. tools, equipment, and encouragement) to make my work meaningful to my life.

Strongly Agree Agree Disagree Strongly Disagree

3. When I do good work, someone in this Emergency Department notices it.

Strongly Agree Agree Disagree Strongly Disagree

4. How stressful would you say it is to work in this Emergency Department?

Very stressful Somewhat stressful A little stressful Not stressful

5. How easy is it to ask anyone a question of another staff member about the way we care for patients?

Very easy Easy Difficult Very difficult

6. How would you rate other people's morale and their attitudes about working here?

Excellent Very Good Good Fair Poor

7. This Emergency Department is a better place to work than it was 12 months ago.

Strongly Agree Agree Disagree Strongly Disagree

8. I would recommend this Emergency Department as a great place to work.

Strongly Agree Agree Disagree Strongly Disagree

Page 2 – Staff Satisfaction Survey.

9. What would make this Emergency Department better for patients?

10. What would make this Emergency Department better for those who work here?

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Please feel free to provide additional comments and/or to talk to a senior member of staff about any issues you may wish to discuss. Thank-you for completing this survey.

2.3.3 Emergency Department Activity Survey

Emergency Department Activity Survey

- Step 1: Ask nursing and medical staff representatives to list all the activities they undertake during a working day and to estimate approximately how much time they spend on each activity. Similar surveys could be developed for other ED staff.
- Step 2: Use this list to develop an activity occurrence sheet for each staff group and ask group representatives to measure how often each activity occurs during each day for a week. Start with nursing and medical staff and then adapt the template to cover all team roles over time. The templates below are intended as examples only – please adapt for local use.
- Step 3: Review the results with the test participants to (a) identify tasks that might be reallocated to other team roles to ensure that the right task is being done by the right person at all times (b) manage staff workload and improve matching of service demand with resource availability e.g. non-essential tasks should be minimised during periods of maximum clinical demand.

Emergency Doctor - Grade:	Mins (% of shift duration)
Activity: <u>See Patients in ED</u>	
• Assess/diagnose patient	
• Review previous hospital notes	
• Determine treatment plan	
• Other	
Activity: <u>Procedures</u>	
• Resuscitative procedures e.g. central lines	
• Suturing, splitting etc.	
Activity: <u>Drug therapies</u>	
• Preparing and administer drugs, infusions etc	
Activity: <u>Write notes / Obtain senior opinion</u>	
• Writing notes	
• Discussions with senior clinicians	
Activity: <u>Complete Request Forms to request investigation and discussions with clinicians re texts</u>	
Activity: <u>Referral issues</u>	
• Referral phone calls	
• Other	
Activity: <u>Phone Calls for other reasons</u>	
• Answer patient/family calls	
• Other	
Activity: <u>Evaluate Test Results</u>	
• Obtain results, review and determine next actions	
Activity: <u>Write Prescriptions and Discharge Documentation</u>	
Activity: Teaching, supervised handover in ED etc.	
Activity: <u>Miscellaneous</u>	
Specific Items Involved:	
• Breaks for food and comfort	
• Mandatory training outside ED	
• Other	
Total	(100%)

2.3.3 Emergency Department Activity Survey (continued)

Emergency Nurse	Grade:	Minutes (% of shift duration)
Activity: <u>Triage</u>		
<ul style="list-style-type: none"> Working as Triage Nurse 		
Activity: <u>Initial Assessment</u>		
Specific Items Involved:		
<ul style="list-style-type: none"> Rapid Assessment & Treatment (post-triage initial assessment e.g. urine tests, ecgs etc.) Phoning/meeting relatives & carers 		
Activity: <u>Direct Patient Care</u>		
Specific Items Involved:		
<ul style="list-style-type: none"> Assisting doctor with patients Essential ED patient nursing care Administering medication Undertaking procedures e.g. suturing, splinting, wound cleaning, catheterisation, cannulation etc. Caring for boarded patients i.e. Admitted patients in ED more than 3 hours after referral 		
Activity: <u>Phone Calls</u>		
Specific Items Involved:		
<ul style="list-style-type: none"> Ward handovers of admitted patients Phoning on-call teams to review patients Phone-calls other 		
Activity: <u>Documentation</u>		
<ul style="list-style-type: none"> Working on written care plans Other documentation 		
Activity: <u>ED preparation and stocking</u>		
Specific Items Involved:		
<ul style="list-style-type: none"> Stocking clinical areas Ordering drugs, consumables, notifying equipment repairs etc. 		
Activity: <u>Miscellaneous</u>		
Specific Items Involved:		
<ul style="list-style-type: none"> Breaks for food and comfort Mandatory training in or out-with ED Other 		
Total		100%

2.3.2 Continued Activity Occurrence Sheet for Analysis:

Role: Nurse	Date:			Day of Week:	
	Complete if on day-shift		Complete if on night-shift		
Visit Activities	07:30 to 13:30	13:31 to 19:30	19:30 to 01:30	01:30 to 07:30	Total
Triage (number of patients)	write number or count in 5s as below				
Initial Assessment					
Direct Patient Care					
Phone Calls					
Documentation					
Miscellaneous					
Totals					

2.4 Process

2.4.1 Introduction

Beginning to have all staff understand the process of ED care is important in developing a shared focus on quality and improvement. Better quality, better value care can be achieved through making processes more efficient, thereby releasing staff from non-value added activities so that they have more time to engage in direct patient care. Efficient processes also allow teams to optimise the use of cubicles, equipment and other resources in the ED. This section provides tools to analyse ED processes:

- Patient cycle-time reports;
- Understanding core and supporting processes.

Processes

2.4.1.1	Review any process mapping or modelling previously undertaken in your ED or create a process map of routine processes. List key findings that suggest which improvements are needed to achieve the EMP access standards in your ED. See 2.4.3 List summary outcomes: <i>A brief introduction to process mapping is provided and additional support will be available through the EMP.</i>
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Summary comment:

2.4.1.2	Assess your core and supporting processes. – section 2.4.4
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Summary comment:

2.4.1.3	Complete a limited number of patient cycle-time tool reports (e.g. <10 cases). What areas for improvement can you identify? <i>A small number of cases (<10) are sufficient for improvement work See 2.4.2 cycle time tool</i>
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Summary comment:

2.4.2 Patient Cycle Time Tool

Patient Cycle Time Tool

If your EDIS allows patient cycle times can be analysed and reported, but even EDs without adequate ICT support can track performance in regard to the 6-hour Total ED Time Standard by undertaking patient cycle time exercise, using the template below. This is labour intensive and will require some one to track patients. However, even a small sample size of 10 or fewer patients will provide valuable insight and help you identify where improvement efforts should be targeted.

Test patient MRN:			Presenting Complaint:		
Observer:		Date:		Day of week:	
Process			Start time:		End time:
Ambulance Arrival Time					
Registration Time					
Triage					
Rapid Assessment and Triage (if provided)					
Time placed in cubicle for examination					(time out of cubicle)
Time Seen by Treating Clinician					
Time Laboratory Tests Sent and Results Available (if undertaken)			(time sample from patient)		(time result reviewed)
Time Imaging Requested (if undertaken)					
Disposition Decision					
Time Referred for Admission/Consultation (if referred)					
Time On-call Team first Reviewed / Completion of Assessment			(time first assessed)		(time of completion)
Time Bed Booked					
Time placed in sub-wait/other area awaiting review (if ambulatory)					(called-in for review)
Time of EM Discharge					
ED Departure Time					
Recommendations the basis of this observation:					

2.4.3 Introduction to Process Mapping

Flowcharts may be used to review processes, identify unnecessary work, delays and opportunities to streamline and improve. Flow charts should be kept as simple as possible – start with just one flow chart. More detailed flow charts can be used to investigate interim stages in the patient’s journey through the ED and other ED processes. Examples are available in the EMP Report.

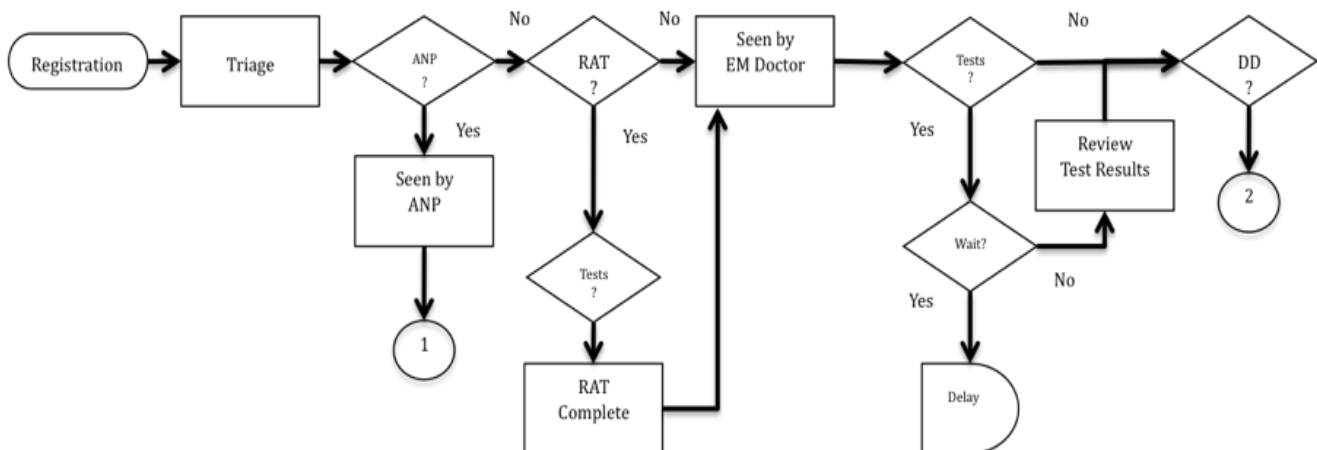
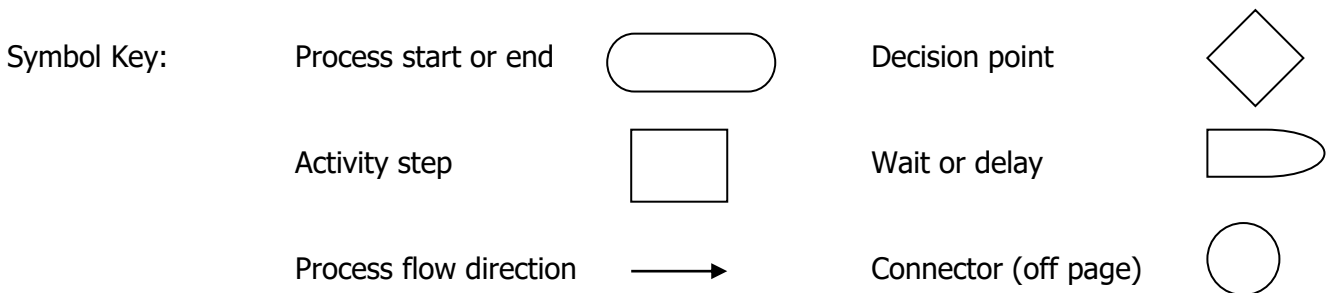


Figure: Example of high-level flow diagram of initial stages in patient journey.

Abbreviations and Key:

ANP = Advanced Nurse Practitioner

RAT = Rapid Assessment and Treatment

DD = Disposition Decision

1 = Connector to ANP Pathway of care

2 = Connector to further pathways after Disposition Decision

2.4.4 Know Your Core and Supporting Processes

Know Your Core and Supporting Processes

The Clinical Microsystems approach recommends that all staff are asked to review and rate ED processes. Adapt this template for your ED, adding other processes. Explore improvements for each process based on the outcomes of this assessment tool. One way to analyse problematic processes is to flowchart them in their current state. Small tests of change can be used to improve the processes that need it (e.g. using PDSA cycles).

Process	Works well	Small problem	Significant problem	Totally Broken	Cannot rate	We're working on it	Source of patient complaint
Patient registration – ambulance arrivals							
Patient registration – ambulatory/walk-ins							
Answering phones reception*							
Answering phones in clinical area*							
Pain Assessment and management							
Rapid first ECG when indicated							
Labelling transfusion samples							
Requesting routine X-rays							
Requesting CT							
Transferring patients for imaging or other clinical investigation within the hospital							
Reporting imaging							
Oral medication administration							
Administration IV infusions							
Pharmacy supplies							
Ordering other supplies							
Stocking supplies							
Equipment repair							
Referral procedures							
Timely access in-patient bed							
Patient handover to ward							
Patient handover ED team at end of shift							
Nursing handover in ED							
Review clinic patient throughput							

* If answering phones is a problem, consider tracking the volume and types of calls for a week. See section 2.5.3

2.5 Patterns

2.5.1 Introduction

Patterns exist in our daily work and we may or may not be aware of them. Understanding these patterns may point to areas where improvements are needed. Identifying and analyzing patterns show 'how things work' in your ED. Consider the following questions¹ to assess your ED's patterns.

- What are the health outcomes of our patients?
- What does it feel like to work here?
- How might the culture of this ED be described?
- How effective is leadership in this ED?
- What are regularly occurring or sequential work activities?
- What have you successfully changed?
- What are you most proud of?

The Unplanned Activity Tracking Tool will highlight patterns of unplanned activity that interrupt work-flow. This tool can be adapted for any ED role. Focus in particular on activity that is not adding value from the patient's perspective.

Telephone calls can contribute to unplanned activity in EDs. Tracking patterns in the volumes and types of telephone calls can be used to determine if some calls might be redirected or handled differently to improve ED efficiency.

How do we interact within our ED?

2.5.1.1

Patient safety

Do the members of the department regularly review and discuss safety and reliability issues?
How is patient safety data communicated to the ED team?

Summary comment:

2.5.1.2

Quality of care – patient outcomes

How are patient outcome/clinical audit data shared within the ED and with other hospital teams?

Summary comment:

How do we interact within our ED (continued)?	
2.5.1.3	<p>Quality of care – evidence based guidelines and protocols</p> <p>How are new guidelines, protocols and quality tools disseminated across your ED?</p>
Summary comment:	
2.5.1.4	<p>Patient access</p> <p>Are there patterns in how patients access different pathways of care in your ED? e.g. access to ANP care, CDU care, admission pathways, transfers to other units? Do these units work well? Do the patterns highlight areas for improvement?</p>
Summary comment:	
2.5.1.5	<p>Interview staff to identify work patterns they have noticed that do not serve patients well e.g. referral delays for certain conditions. Staff may not have felt empowered to resolve these issues previously but may wish to do so now in conjunction with EMP-driven ED improvement activity.</p> <p><i>Note: A data-driven improvement approach is most likely to be effective in addressing these issues. The core process grid will help to identify these broken processes.</i></p>
Summary comment:	
2.5.1.6	<p>ED team communication</p> <p>Are there patterns in the methods of communication used in your ED? e.g. does the ED team meet regularly? How frequently? Do some team members or groups have particular difficulty getting to meetings? How and when are other forms of communication used?</p>
Summary comment:	

How does the ED interact with other systems?

2.5.1.7 How does your ED team interact with your hospital management team?

Summary comment:

2.5.1.8 How does your ED team interact with other hospital departments and services? Are there patterns of variation in these interactions such as lab turnaround times, speciality team times, speed of admission etc.?

Summary comment:

2.5.1.9 How does your ED team interact with services and systems outside the hospital? e.g. Primary Care, the ambulance service, community teams etc.

Summary comment:

Costs of care: Are there identifiable patterns in the financial management of your ED?

2.5.1.10 What are the costs of care delivered in your ED?
 What visibility does your ED team have over costs and finances?
 How are staff engaged in optimising value (i.e. patient outcomes per unit cost) in your ED?
 Do the patterns identify any areas for improvement that would increase the value of care in your ED?

Summary comment:

2.5.2 Unplanned Activity Tracking Tool

Unplanned Activity Tracking Tool

Interruptions, waits and delays inhibit the efficient provision of care. This tool enables staff to tally and track such events during a working day. Trial this card with different groups of staff – adapt as required. Do clear patterns emerge? Analysis of results will point you to areas where processes could be improved.

Name:	Date:
Source of Interruption / Delay:	Number of events in a given day:
Phone interruption	
Missing ED notes	
Delay obtaining hospital in-patient notes	
Missing supplies	
Missing test results	
Equipment alarms	
Interrupted by a doctor seeking clinical advice	
Interrupted by a doctor any other reason	
Interrupted by a nurse regarding patient care issues	
Interrupted by a nurse other issues	
Interrupted by other staff members	
Delays contacting on-call teams	
Delays finding cubicle to examine patient	
Delay because patient not ready for examination	
<i>Add other delays that may occur in your ED</i>	

2.5.3 Telephone Tracking Log

Construct a log of incoming telephone calls to your ED per category for a week to identify patterns in calls volumes and types. Categories may be customised for your ED but might include *inter alia*:

- Patient relative/carer enquiries;
- Enquiries from other departments in the hospital;
- Referral calls;
- Messages for staff;
- Calls from within the ED.

2.6 Metrics that Matter

2.6.1 Introduction

Metrics (or measures) and key performance indicators (KPIs) are important to achieving, demonstrating and sustaining improvements. It is more important to analyse a limited number of metrics than to collect lots of data that are not analysed and do not provide useful information to drive quality improvement. Selecting an appropriate set of metrics for your ED is an essential component of developing a cycle of continuous improvement. The EMP recommends the use of standardised measures of quality, access and value for all EDs but your unit may wish to measure additional metrics that are important to the success of your department. A balanced set of metrics to provide insight into what's working and what's not working well.

The ED Lead Team/Clinical Operational Group will oversee the use of metrics in each ED. Quality begins with the intention to achieve measured excellence.⁴ Measurement will indicate when improvements are needed, if attempted improvements are successful (or not), if they are sustained and how performance may vary over time. Metrics should be displayed where the entire ED team can see them e.g. on data walls that are updated daily, weekly, monthly and annually. Each metric or group of metrics needs a data owner who will collect the data and ensure that they are shared with the ED team. Time trend (run charts, SPC charts) and bar charts are effective ways to display ED data. Review your set of metrics on a regular basis and use them to initiate and sustain improvement in your ED.

2.6.2 Metrics that Matter

- Review the currently determined “best metrics” Emergency Departments should be monitoring.
- List your current performance in these metrics and what the targets are.

Emergency Department Metrics That Matter

Name of Measure	Definition & Data Owner	Current & Target Values	Action Plan & Process Owner
General Metrics			
<u>Flow</u>			
ED compliance with 6-hour standard (monthly)			
Median LOS for all ED patients			
ED compliance - ambulance handover KPI			
Records of ED going off-call (if ever)			
<u>Staffing Patterns</u>			
Nursing Agency / Bank / Overtime			
Locum doctors			
Nursing staff turnover*			
<u>Safety and Wellness</u>			
Patient falls in your ED in last year**			
Workdays lost due to illness			
Incident reports**			
<u>Patient Experience</u>			
Review any patient feedback available#			
Left before completion of treatment rates			
<u>Finance</u>			
What was your unit's budget last year?			
What % was for staffing, supplies, drugs etc?			
Emergency Department Specific Quality Measures			
<i>Review any available audit data from the past year ##:</i>			
<u>ACS/AMI</u>			
Aspirin prehospital/ at arrival			
Time to reperfusion			
<u>Stroke</u>			
Time to reperfusion for suitable patients			
Continued.....			
<u>Sepsis</u>			

Time to antibiotics			
Use of Sepsis Bundle or other measures			
<ul style="list-style-type: none"> • * Denotes data available through EMP Staff Survey, if not available locally • ** Denotes data that should be accessible through your hospital risk management department; review any available data from the past year • # e.g.: compliments, complaints, patient surveys. Anonymised feedback also available through EMP • ## please use locally available audit results for these or other quality measures available, pending definition of national quality KPIs by the EMP. 			

2.6.3 Patient Safety and Quality of Care

What patient safety, quality of care and patient experience measures do you monitor in your ED?

What are the target values for these measures?

What is the action plan to improve or sustain your level of performance?

A suite of quality KPIs for EM will be developed by the EMP.

2.6.4 Patient Access

Does your ED have systems in place to monitor the EMP Access KPIs?

How are these metrics analysed in your ED

What is the action plan to improve or sustain your level of performance?

Sampling methods may be used to collect relevant data if your EDIS cannot automatically report these metrics at this time.

2.6.5 Value in ED care

What measures could you introduce in your ED to track savings achieved through EMP Improvement activity? These may be savings made within the ED or the hospital in general e.g. inventory savings, more prudent use of laboratory investigations etc. Locally derived measures are recommended, pending the future development of national systems for cost allocation and financial management in emergency care.

2.6.6 Other 'Metrics that Matter' in your ED

List any metrics that you consider are also important for improving your ED.

3. Diagnose your Emergency Department

3.1 Overview

This phase focuses on working with the interdisciplinary team to review the results of the Assessment phase to make an informed and correct overall 'Diagnosis' of your microsystem and then define a 'Treatment Plan'.

- 1 **Identify those elements of your ED that are working well and acknowledge these with the ED team** e.g. list the three most significant positive changes in your ED in the past year; list the achievements of which your ED team is most proud. Identify why they were successful and use the lessons learned from these successes to repeat in new improvement initiatives.
- 2 Identify opportunities to improve. **These may come from within your microsystem or from other systems** e.g. from the hospital, other specialties and National Clinical Programmes or the community. Lean exercises (e.g. the 7 wastes)¹² may identify areas at which improvement should be targeted.
- 3 Collate the information from your ED assessment and analysis tools and Metrics that Matter to get a "big picture" of your ED microsystem. Identify linkages in the information and 'themes' for improvement e.g. patient safety issues, patterns of patient outcomes you may wish to improve, waste and delays in process steps, patterns of excessive variation in processes etc.
- 4 **It is advisable to focus on one important improvement theme at a time.** Identify all the people with whom you will need to work to deliver this improvement. Prioritise issues for action according to how much benefit they will bring for patients versus the effort they will require to succeed. The following considerations may help with the prioritisation process:
 - Patient safety issues should be addressed as the highest priority;
 - Improvements that can be delivered without major effort within the ED allow teams to build improvement competence and confidence before tackling more complex problems e.g. increasing the use of existing protocols and procedures;
 - Issues that require a focused improvement project. These may include projects that deliverable within the ED or projects involving other specialties and services. Some projects may require hospital management attention or additional resources.
- 5 **Defining a Global Aim Statement (a Diagnosis) for the selected improvement theme will help keep the work involved focussed and effective.** Successive improvement themes each require a global aim statement. Each improvement theme may involve a number of improvement projects.

3.2 Global Aim Statement

"Diagnostic" Template – Global Aim Statement

Theme for Improvement:	
We aim to improve:	<i>Name the process and create an overall aim statement that will help keep your focus clear</i>
Location:	<i>Clinical Location of process</i>
Process begins with:	<i>Start point</i>
Process ends with:	<i>End point</i>
Expected benefits:	<i>What improvements expected?</i>
It is important to work on this now because:	<i>Why is this important? Why do this now rather than at a later date? i.e. the 'drivers' for this improvement.</i>
What action / interventions?	<i>What is required?</i>
By whom:	
Action due by when:	
Resources required:	<i>People, budget and others</i>
Measures:	<i>How will achievement of improvement be tracked and measured?</i>
Next Steps:	

4. Treat your Emergency Department

Now that you have completed your assessment, made a diagnosis and selected a theme or themes for improvement, your ED will require a unique “treatment plan”. The work and time required for improvement should not be underestimated. Using proven methods from improvement science will increase your chances of success. Improvement is about constant learning. Failures can be expected to occur despite the team’s best efforts to anticipate and mitigate the risks of failure. When failures happen they should be analysed to generate further learning.

Change ideas from the Improvement Guide⁶ are listed in sections 4.5. Specific improvement themes recommended by the EMP are outlined in Appendix 2. Each theme may involve multiple small improvement projects. ED teams should select those themes that are particularly relevant to their microsystem. Even mature improvement organisations and systems find that improvement is a never-ending journey of learning in pursuit of better care for patients.

4.1 Model for Improvement

A specific aim statement, linked to the global aim statement, will guide the improvement project (section 4.6). It should include the aim, specific measures and dates. The Model for Improvement^{6,7} recommends the use of Plan-Do-Study-Act cycles (PDSA) to undertake rapid small tests of change. This means testing a change on a single patient episode or on a small number of cases, analysing the results, testing again, adapting and then moving rapidly to adoption if the change is a true improvement. Successive PDSA cycles are used to trial and revise each step of an improvement project (section 4.7). Data from each test episode should be recorded and analysed along with qualitative findings and learning points and the improvement plan amended accordingly. New opportunities for improvement will be identified as the work progresses. Further improvement materials can be accessed in the selected references.

4.2 Standardising Current Best Practice in your ED

When an improvement has been tested is ready for adoption, the improvement team moves into the standardising practice phase and uses the Standardise-Do-Study-Act cycle. Changes in performance, new methods, technology or best practice will often signal the need to return to PDSA cycles to restore or further improve performance. PDSA cycles are interchanged with SDSA cycles over time.

The SDSA cycle steps are:

Standardise the processes – specify who does what, when etc. Tools to record and disseminate standardised processes include Standard Operating Procedures (SOPs), protocols, pathways etc.

Questions to answer during standardisation include:

- Who will standardise the process and embed it into daily practice?
- What needs to be 'unlearned' or changed to allow this new practice to become the norm?
- What data will inform us if this standardised process is being used daily?

Do the work – integrate the processes into daily work to ensure reliability and repeatability.

Study at regular intervals – monitor process measures to ensure improvement is being maintained.

Act on the basis of monitoring data to maintain or adjust the process, until a new series of PDSA cycles are required. The PDSA Worksheet in section 4.7 can be adapted for SDSA cycles.

4.3 Adapt Known Best Practices

Avoid 'reinventing the wheel' by adapting known effective practices and change ideas from other teams for use in your ED. Remember however that each microsystem has a unique 'context' and a process that works in one ED may need significant adaptation to produce similar outcomes in another.

4.4 Embedding improvement:

One way to integrate improvement into the daily work of an ED is through the use of Huddles or Status Briefings (whichever terminology is preferred) at the beginning of shifts (section 4.8). They can be structured to include safety awareness, a look-back on the previous shift, look-forward to anticipate and mitigate risks that may occur during the coming shift. Huddles are intended to be quick and focussed on providing essential safety and improvement communication within the ED team.

4.5 Change concepts from the Improvement Guide⁶

- A. Eliminate waste;
- B. Improve workflow;
- C. Optimise inventory;
- D. Change the work environment;
- E. Enhance the producer/customer relationship (patient/provider);
- F. Manage time;
- G. Manage variation;
- H. Design systems to avoid mistakes;
- I. Focus on the product or service.

4.6 Specific Aim Statement

Specific Aim Statement	
Global Aim:	<i>The relevant improvement theme e.g. to improve</i>
Specific Aim:	<i>To reduce/increase 'X' by Y% by (date)</i>
Measures:	<i>These must be specific; consider how this data will be collected</i>

4.7 PDSA cycles

Plan, Do, Study, Act - PDSA:

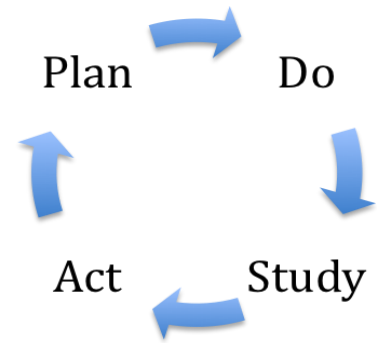
Plan: Test aim, who, when, where, how, measures?

Do: Test change for one day or one shift or a few hours
Measure the effect and record it.

Study: What happened? What have we learned?
What will we do differently next time? Record decision.

Act: Do we continue, abandon, modify. Plan next cycle of change.

PDSA cycles should be used repeatedly on small numbers of cases to learn what works. This is improvement not classic healthcare research, so large sample numbers are not required. An improvement ramp⁹ illustrates how successive PDSA cycles contribute to achieving the global improvement aim.



PDSA Worksheet:

Use a worksheet¹⁰ to execute the PDSA cycle in a structured manner.

PLAN for TEST:				
Aim of Test:		(consider a predicted outcome to be tested)		
Tasks to be completed to run the test of change	By whom	When	Tools needed	Measures
DO: What are we learning as we DO the pilot? What challenges? Any insights to lead to another PDSA cycle?				
STUDY: What do the measures show? What have we learned?				
ACT: Do we adopt the change? Do we modify the change? Make a PLAN for the next change.				

Further information on the Improvement Method can be found on the Institute for Healthcare Improvement website:

<http://www.ihl.org/knowledge/Pages/HowtoImprove/ScienceofImprovementSettingAims.aspx> and PDSA worksheets are available at: <http://www.clinicalmicrosystem.org/assets/materials/worksheets/PDSA-SDSA.doc>.

4.8 ED Huddle (Status Briefing)

ED Huddle (Status Briefing)

This template, adapted from Clinical Microsystems⁴ and the IHI Safety Briefing¹³ models is recommended for use by ED teams for briefings at the beginning of shifts to embed safety awareness and service improvement in their daily work. Some teams may wish to have end of shift de-briefings also. Briefings or huddles enable teams to be more proactive about the challenges faced in providing high quality emergency care for patients.

Aim:	Enable the Emergency Department to proactively anticipate and plan actions based on patient need and available resources and contingency planning. ¹
Conducted by	Team Shift Leader
Anticipated duration	5 – 10 minutes
Approach	Non-judgmental (may need ongoing reassurance), positive, team-building approach
1. Safety Briefing	<p>Questions to ask: What patient safety issues do we need to be aware of on this shift?</p> <p>Examples include: Patients: Two patients with similar names; patients with challenging behaviour; Professionals: Agency or locum staff who may not be familiar with ED on shift; Process: New equipment – are all staff trained in its use? Infection prevention and control issues: isolation procedures in use; Awareness of any recent near misses or recently identified safety issues that affected patients or staff. These must be communicated in a way that respects patient and staff confidentiality. Feedback and actions taken to prevent recurrences should also be included.</p>
2. Follow-ups from yesterday	Issues raised and solutions introduced or being developed.
3. Heads-up for today	Anticipated challenges e.g. illness related leave, staffing levels, demand surges; Meetings/training sessions staff may need to attend; New initiatives/information e.g. new protocols; feedback ED performance data headlines.
4. Planning for tomorrow and the week ahead.	Anticipated challenges.
5. Team morale	Remind staff of recent achievements, compliments from patients and what works well in the ED.
At end of shift staff may be asked to report any safety issues, near misses or risks identified during the shift. The ED management team should maintain a summary record of each briefing.	

5. Follow-up

5.1 Communication

Share your ED diagnostic findings and plans with all team members to increase understanding of your ED microsystem among your team. Consider how this can be best achieved in your ED and draw up a communication plan – options include a notice board, a newsletter, an intranet site update, multidisciplinary meetings etc. All team members should be aware of what areas of improvement your team has prioritised and why. Interim results are shared with team members as projects progress, according to improvement science methodology. It will also be necessary to communicate about planned changes with non-emergency staff groups (e.g. on-call teams) who work episodically in your ED. Please consider how this communication can best be managed in your hospital to ensure effective and consistent communication occurs across all service interfaces.

5.2 Sustaining Improvement

Over time, each ED team will develop a portfolio of improvement work, aligned to the ED's purpose, the aims of the EMP and the hospital's and health service's strategic plans. The overarching aim of the EMP is to improve quality, access and cost in ED care. Our improvement vision is to transform the National Emergency Care System into a high quality, high reliability system and this will be achieved through incremental improvement at ED microsystem level. Achieving improvements that will benefit ED patients and staff will require the sustained efforts of entire ED teams and the support of hospital colleagues and health service management teams.

Appendix 1: Data Sources and Owners

Data Items		Data Source	Date/Owner
		Data Collection Action	
2.2	ED baseline activity data		
2.2.1	Patient experience survey		
2.2.2	Through the eyes of your patient		
2.3.2	Staff satisfaction survey		
2.3.3	ED activity survey		
2.4.2	Patient cycle time tool		
2.4.3	Process mapping records		
2.4.4	Know your core and supporting processes		
2.5.2	Unplanned activity tracking data		
2.5.3	Telephone tracking data		
2.6	Measures that matter – quality and patient safety		
2.6	Measures that matter – access		
2.6	Measures that matter – value		
2.6	Measures that matter – other; condition-specific; quality indicators		
	Insert any other data items specific to your ED		

Note: Data collection action describes how data are collected e.g. manually by sampling or through EDIS report.

Appendix 2: EMP Recommended Improvement Themes

- Patient safety issues specific to each ED and hospital;
- Improving the quality of patient care by freeing up clinician time for direct patient care;
- Initiatives to improve outcomes for key patient group e.g. reperfusion targets; multidisciplinary assessment of older patients with complex care needs etc.
- Increased use of evidence-based clinical guidelines and protocols;
- Changes to improve compliance with 6-hour ED standard and its component steps:
 - Avoiding delays to patient registration;
 - Timely triage;
 - Appropriate use of Rapid Assessment and Treatment;
 - Patient streaming;
 - Optimising the timeliness of care from arrival to time seen by a treating clinician, clinician to disposition decision and disposition decision to departure for EM discharged patients and patients referred for admission;
 - Ensuring patients referred for admission are moved to available ward beds in a timely manner;
- Improving compliance with ambulance patient handover time;
- Actions to ensure all CDU patients complete care within 24 hours of ED registration.
- Projects to improve value in care (i.e. outcomes per unit cost, measured over time).

Appendix 3: References

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