essential element 3

RAPID RESPONSE SYSTEMS

rapid response systems

the problem

There is a narrow window of time in which to provide treatment to reverse or reduce the amount of physiological damage associated with severe clinical deterioration.

Not all hospitals in Australia have well coordinated processes in place to provide rapid emergency assistance.

goals of this essential element

Patients who meet criteria for a rapid response call receive immediate and appropriate emergency assistance.

Patients receive emergency assistance that is based on current national resuscitation guidelines and other evidence.

Rapid response providers are proficient at providing emergency assistance, as well as clinical teaching and mentorship to other health professionals.

what you need to do

Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating.

Ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team.

common terms used in this essential element

Rapid response system: the system for providing emergency assistance to patients whose condition is deteriorating.

Rapid response provider: the clinical team or individual responsible for providing emergency assistance to patients whose condition is deteriorating.

essential element 3: rapid response systems

3.1 Some form of rapid response system should exist to ensure that specialised and timely care is available to patients whose condition is deteriorating.

3.2 Criteria for triggering the rapid response system should be included in the escalation protocol.

3.3 The nature of the rapid response system needs to be appropriate to the size, role, resources and staffing mix of the acute care facility.

3.4 The clinicians providing emergency assistance as part of the rapid response system should:

- be available to respond within agreed timeframes
- be able to assess the patient and provide a provisional diagnosis
- be able to undertake appropriate initial therapeutic intervention
- be able to stabilise and maintain the patient pending definitive disposition
- have authority to make transfer decisions and to access other care providers to deliver definitive care.

3.5 As part of the rapid response system, there should be access at all times to at least one clinician, either on-site or in close proximity, who can practice advanced life support.

3.6 The clinicians providing emergency assistance should have access to a staff member of sufficient seniority to make treatment-limiting decisions. Where possible, these decisions should be made with input from the patient, family and the attending medical officer or team.

3.7 In cases where patients need to be transferred to another site to receive emergency assistance, appropriate care needs to be provided to support them until such assistance is available.

3.8 When a call is made for emergency assistance, the attending medical officer or team should be notified as soon as practicable that the call has been made, and where possible they should attend to support and learn from the clinicians providing assistance.

3.9 All opportunities should be taken by the clinicians providing emergency assistance to use the call as an educational opportunity for ward staff and students.

3.10 The clinicians providing emergency assistance should communicate in an appropriate, detailed and structured way with the attending medical officer or team about the consequences of the call, including documenting information in the healthcare record.

3.11 Events surrounding the call for emergency assistance and actions resulting from the call should be documented in the health care record and considered as part of ongoing quality improvement processes.

STEP 1 roles and responsibilities

Who is responsible?
How does this element apply to your role(s)?
What clinical areas does this element apply to?

A variety of health professionals are involved in developing and implementing rapid response systems. To improve systems for providing emergency assistance, health professionals need to determine who will be responsible for undertaking the tasks required for this essential element.

table 4 ▸ ROLES AND RESPONSIBILITIES RELATING TO RAPID RESPONSE SYSTEMS

	People involved in rapid response systems	
Clinical areas involved in rapid response systems	**Role**	**Responsibility**
All acute care areas of a facility need to provide emergency assistance using a rapid response system for patients who deteriorate. This includes: • emergency departments • intensive care units or high dependency units • general wards and speciality areas • maternity units • paediatric units • mental health units • operating theatre recovery units • other clinical areas where patients receive acute care treatments	Consumers, patients, families and carers	• Alert clinicians to any worries or concerns • Participate in developing rapid response systems
	Non-clinical workforce	• Participate in education and training programs related to rapid response system use and emergency assistance • Use the rapid response system correctly
	Clinical workforce	• Use the rapid response system correctly • Participate in education and training programs related to rapid response system use and emergency assistance • Participate in evaluating the rapid response system • Participate in identifying the roles and responsibilities of the clinicians who provide the rapid response and the clinicians who activate the system
	Educators	• Provide education and training using simulation or supervised clinical activities related to emergency assistance • Train rapid response providers in educational techniques and mentorship skills • Participate in evaluating the rapid response system
	Health professionals with responsibility for policy or quality improvement	• Develop trigger thresholds and responses for providing emergency assistance • Identify roles and responsibilities of the rapid response providers and the clinicians who activate the system, and include in the escalation policy • Provide a flow diagram summarising the rapid response system in the escalation policy and clinical areas • Develop treatment protocols or algorithms that incorporate national resuscitation guidelines and other sources of current evidence • Develop process of care and outcome measures for ongoing evaluation of the rapid response system • Participate in evaluating the rapid response system • Participate in education and training programs related to rapid response system use and emergency assistance
	Health service managers	• Ensure emergency equipment undergoes regular maintenance and checks • Provide ongoing access to training programs for clinicians responsible for providing emergency assistance • Ensure equipment for providing emergency assistance and methods for delivering this equipment to the patient's bedside are available • Participate in education and training programs related to rapid response system use and emergency assistance

table 4 ▸ CONTINUED...

	People involved in rapid response systems	
Clinical areas involved in rapid response systems	**Role**	
	Health service boards, executives and owners	• Assign responsibility, personnel and resources to support development, implementation and evaluation of a rapid response system • Provide managers with support to implement rapid response system protocols and processes in their areas • Lead, develop and support strategies to ensure optimal use of the system • Ensure ongoing access to training programs for clinicians responsible for providing emergency assistance • Participate in education and training programs related to rapid response system use and emergency assistance

implementation tip

Developing and implementing rapid response systems

- Rapid response systems form one component of a facility's graded escalation response, and should therefore be developed as part of the overall escalation policy. Use the information and examples in *Essential element 2: Escalation of care*, as well as the information in this essential element, to develop and review your rapid response systems.
- Acute care facilities that need to establish a rapid response system will require information on the resources available for providing emergency assistance (e.g. clinical and non-clinical workforce mix and skills, equipment, remote telemedicine systems, external resources such as ambulances) at different times of the day and days of the week. This information may help facilities decide which type of rapid response system they use, and will help identify any additional resource requirements.
- To provide effective emergency assistance, rapid response systems need to be well integrated into clinical areas, operating as an extension of the care provided by the healthcare team. Be sure to seek representation from doctors, nurses and allied health professionals from different clinical areas when developing these systems. This will help facilitate agreement on the various roles and responsibilities associated with operation of the system.
- Continuous evaluation and ongoing education of the clinical and non-clinical workforce in the use of rapid response systems are essential to their successful integration and operation. Therefore, health professionals responsible for providing education, clinical skills training, evaluation and governance should be involved in developing rapid response systems.

STEP 2 self-assessment and planning tool

Use the self-assessment tool to identify gaps in your rapid response systems and develop an action plan.

Prioritise your changes.

The self-assessment and planning tool has been designed to assess one clinical area, or an entire facility's current practice, in relation to this essential element. A modifiable electronic version of this tool, and other supporting tools to help answer the self-assessment questions, are available on the Commission's web site.

The action plan for this essential element begins on page 147. Follow the instructions in the self-assessment and planning tool to complete the action plan.

NAME OF WARD OR AREA BEING ASSESSED:

⊙ task 1 **Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating**		**Data or documentation that proves the criteria have been met** **Type of data or name of document**
AGREEMENT Is there agreement on the type of rapid response system model to use?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of agreement' in your action plan	
Have roles and responsibilities of rapid response providers been decided?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of agreement' in your action plan	
PROCESS OR POLICY Is there a protocol that outlines use of the rapid response system?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of process/ policy' in your action plan	
Are details of this protocol included in the facility's escalation policy?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of process/ policy' in your action plan	
Are emergency assistance treatment protocols and algorithms available?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of process/ policy' in your action plan	

Where is it kept?	Are these policies/processes/ resources operating as planned? Does your data demonstrate effective operation at all times?
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan

NAME OF WARD OR AREA BEING ASSESSED:

⊙ task 1 **Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating**		**Data or documentation that proves the criteria have been met** **Type of data or name of document**
RESOURCES Is there access, at all times, to a clinician who can practise advanced life support?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of resources' in your action plan	
Are equipment and pharmaceuticals for providing emergency assistance available?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of resources' in your action plan	
Is this equipment functional and well maintained?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of resources' in your action plan	
KNOWLEDGE Have rapid response providers received training to provide emergency assistance?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of knowledge' in your action plan	
Have rapid response providers received training in clinical teaching and mentorship?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of knowledge' in your action plan	
SYSTEMS TO SUPPORT MONITORING AND EVALUATION Are systems for evaluating the rapid response system in place?	☐ **YES** ▸ Fill in next two columns ☐ **NO** ▸ Tick 'Lack of monitoring and evaluation' in your action plan	

Where is it kept?	Are these policies/processes/ resources operating as planned? Does your data demonstrate effective operation at all times?
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan
	☐ YES ▸ WELL DONE! Continue to monitor ☐ NO ▸ Why not? What are the barriers? Add these to your action plan

NAME OF WARD OR AREA BEING ASSESSED:

⊙ task 2 **Ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team**		**Data or documentation that proves the criteria have been met** **Type of data or name of document**
AGREEMENT Have roles and responsibilities for clinicians who activate the rapid response system been decided?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of agreement' in your action plan	
PROCESS OR POLICY Do clinicians use agreed communication processes when clinical deterioration occurs?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of process/ policy' in your action plan	
Are these processes included in the escalation policy or similar document?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of process/ policy' in your action plan	
RESOURCES Is there a health professional with overall responsibility for the rapid response system?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of resources' in your action plan	
KNOWLEDGE Do clinicians receive education on use of the rapid response system?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of knowledge' in your action plan	
SYSTEMS TO SUPPORT MONITORING AND EVALUATION Are rapid response providers included in departmental evaluation processes (e.g. morbidity and mortality meetings)?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of monitoring and evaluation' in your action plan	
Are health professionals' awareness and perceptions of the rapid response system evaluated?	☐ YES ▸ Fill in next two columns ☐ NO ▸ Tick 'Lack of monitoring and evaluation' in your action plan	

Where is it kept?	Are these policies/processes/ resources operating as planned? Does your data demonstrate effective operation at all times?
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan
	YES ▸ WELL DONE! Continue to monitor NO ▸ Why not? What are the barriers? Add these to your action plan

NAME OF WARD OR AREA BEING ASSESSED:

what do you need to do?		how will you do it?
Task not yet achieved	Why has this task not been achieved (barriers)? What actions are needed?	Go to the recommended section of this guide for information on tasks and actions. List the tools and resources from the guide to address this gap here. Also consider other resources that may be available to you to address this gap.
task 1 Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating	☐ Lack of agreement ▸ DECIDE ▸ p152 ☐ Lack of process/policy ▸ DEVELOP ▸ p155 ☐ Lack of resources ▸ RESOURCE ▸ p157 ☐ Lack of knowledge ▸ EDUCATE ▸ p159 ☐ Lack of monitoring and evaluation ▸ EVALUATE ▸ p161	
OTHER POSSIBLE BARRIERS:		
task 2 Ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team	☐ Lack of agreement ▸ DECIDE ▸ p167 ☐ Lack of process/policy ▸ DEVELOP ▸ p169 ☐ Lack of resources ▸ RESOURCE ▸ p171 ☐ Lack of knowledge ▸ EDUCATE ▸ p172 ☐ Lack of monitoring and evaluation ▸ EVALUATE ▸ p173	
OTHER POSSIBLE BARRIERS:		

OTHER COMMENTS AND PLANS:

Use the information from the self-assessment and planning tool to complete the action plan. The action plan links the barriers identified by the self-assessment and planning tool with specific actions, tools and resources to address them.

Who will be responsible?	When will this happen? Consider undertaking actions that are low cost, easy to implement and support meeting the *National safety and quality health service standards* first

STEP 3 information and resources

Use the information and resources in this guide to help implement your action plan.

For each task, the following actions may be required: Decide, Develop, Resource, Educate and Evaluate

Each of the tasks for this essential element is discussed in detail in this section. Each task includes a brief summary of its importance and a series of actions that can be taken to complete it. Links to resources are included in Appendix C and additional tools to support implementation are available on the Commission's web site.

key tasks
for rapid response systems

task 1
Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating

task 2
Ensure rapid response systems and providers operate in partnership with, and as an extension of, the healthcare team

why this task is important

This task is needed because:

- serious adverse events, including death, can occur if rapid emergency assistance is not provided to patients whose condition is deteriorating
- rapid response systems have been shown to reduce in-hospital cardiac arrests, unplanned intensive care unit admissions, morbidity and mortality.

When severe clinical deterioration occurs, it is important to ensure that appropriate emergency assistance or advice is available before an adverse event, such as a cardiac arrest, occurs.[1] Rapid response systems provide this emergency response, and have been shown to reduce in-hospital cardiac arrests, unplanned intensive care unit admissions, morbidity and mortality.[2–8]

learning from coronial inquests

The importance of providing timely emergency assistance

Mr Norman Steele was a 63-year-old man admitted to a rural hospital after collapsing at work. Despite severe and persistent hypotension, and severe abdominal and lower back pain, Mr Steele was not seen by a doctor until seven hours after his admission. There was further delay in referring the patient to a tertiary hospital and the Royal Flying Doctor Service. Mr Steele died from a ruptured abdominal aneurysm 12 hours after his presentation to hospital, while still awaiting transfer.

'By contrast in a major hospital, such as Royal Perth Hospital, a systolic blood pressure reading of less than 90 would have required the nurse taking the reading to contact the medical emergency team (MET).'[9]

'In the present case if there had been such a MET system in place, that system would have not only ensured that the deceased was seen more quickly than was in fact the case, it would have also served to emphasise the gravity of his condition by identifying it as a medical emergency. Implementation of such a system may have saved the deceased's life.'[9]

Rapid response systems provide emergency assistance as part of the graded response set out in a facility's escalation protocol. These systems have been used in many healthcare facilities overseas and throughout Australia. However, evidence suggests that these systems are often under-used.[10]

Rapid response systems are complex and require resources for emergency assistance, data collection and administrative support. Data collection and analysis are essential components of the system, as they identify areas for improvement (process and patient outcomes) and will help drive system changes to ensure optimal use. Similarly, administrative support is needed to ensure resources are available for providing emergency assistance, and to support the day to day running of the system. Further information on the organisational requirements that underpin effective operation of rapid response systems is in *Essential element 5: Organisational supports*. Specifications for quality measures that can be used for evaluation are included in Appendix B.

Acute care facilities cater for different types of clinical conditions and patient types (e.g. adult, maternity, paediatric), and differ in the availability of resources such as equipment, clinician skills and staff numbers. The availability of these resources also fluctuates depending on the time of day or day of the week. These factors will influence how a facility's rapid response system operates. However, the focus is to ensure that patients receive the immediate emergency assistance they need.

Specialised rapid response systems such as acute stroke teams, interventional cardiology teams, obstetric and paediatric teams may exist in some facilities.[11] Other rapid response system models are beginning to emerge from rural and remote facilities that use a variety of staffing compositions, including doctors from emergency or anaesthetics, advanced clinical nurses, general practitioners and ambulance services.

practice point

An example of a rapid response system in a rural facility

A 25-bed rural acute care facility is located 90 minutes from the nearest regional hospital. The hospital is staffed by visiting general practitioners who undertake daily rounds of the hospital and participate in an on call roster for emergencies when off site.

The hospital has a small emergency department, and policies and protocols are in place to enable nursing staff trained in rural and remote nursing to initiate advanced life support (ALS) when the visiting general practitioner is off site. At least one nurse trained in ALS is rostered in the emergency department at all times.

A rapid response system is in operation in the emergency department and the ward. A set of abnormal physiological parameters trigger the emergency response system, which requires the nurse caring for the patient to press the emergency buzzer and begin basic life support whenn a patient breaches the trigger threshold.

If the call for emergency assistance occurs on the ward, a nurse from the emergency department responds to assess the patient and commence treatment under the rural clinical guidelines. The nurse in charge of the hospital also attends and is responsible for contacting the visiting general practitioner if they are off site at the time of the emergency call. The visiting general practitioner on call is then required to review the patient within 15 minutes.

If the rapid response system call occurs in the emergency department, a registered nurse from the ward attends the emergency department to provide extra clinical assistance for the emergency department nurse who is trained in ALS. The nurse in charge of the hospital also attends and is responsible for contacting the visiting general practitioner if they are off site at the time of the emergency call. The visiting general practitioner on call is then required to review the patient within 15 minutes.

how to complete this task

DECIDE → DEVELOP → RESOURCE → EDUCATE → EVALUATE

task 1 – provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating

DECIDE	▶▶▶	Decide which rapid response system model to implement Decide on the roles and responsibilities of rapid response providers
DEVELOP	▶▶▶	Include details of the rapid response system in the escalation protocol and policy Develop emergency assistance treatment protocols
RESOURCE	▶▶▶	Ensure access, at all times, to a clinician who can practise advanced life support Ensure pharmaceuticals and functioning equipment are available to provide emergency assistance
EDUCATE	▶▶▶	Educate rapid response providers to provide emergency assistance Educate rapid response providers in clinical teaching and mentorship
EVALUATE	▶▶▶	Evaluate the effectiveness of the rapid response system

DECIDE

DECIDE WHICH RAPID RESPONSE SYSTEM MODEL TO IMPLEMENT

DECIDE ON THE ROLES AND RESPONSIBILITIES OF RAPID RESPONSE PROVIDERS

Decisions about which type of rapid response system to implement would usually be made by health professionals responsible for clinical governance of recognition and response systems (see *Essential element 5: Organisational supports* for further information). Health professionals may find it useful to review different rapid response systems to identify one that suits the size, role, resources and staffing mix of their own facility. The purpose of rapid response systems is to ensure that all patients who deteriorate receive an immediate and appropriate response. Additional resources may be needed to ensure this can occur, and this should be a key consideration when deciding which rapid response system to implement.

The purpose of rapid response systems is to ensure that all patients who deteriorate receive an immediate and appropriate response.

Several models for the provision of rapid emergency assistance to deteriorating patients are used internationally and in Australia. These include medical emergency teams, rapid response teams, critical care outreach teams and intensive care liaison nurses.

Rapid response systems most commonly vary in the:

- type of physiological parameter used to trigger a rapid response
- value of the trigger threshold that triggers a rapid response
- composition of the response system
- scope of practice of the rapid response providers
- type of clinical care provided by the rapid response providers.

The practice point overleaf outlines some of the characteristics of different rapid response systems currently in use internationally and throughout Australia.

practice point

Characteristics of rapid response systems

MEDICAL EMERGENCY TEAMS (MET)

This rapid response team can:

- prescribe therapy
- provide advanced airway management interventions
- establish central vascular access
- begin an intensive care unit (ICU) level of care at the bedside.[12]

These teams are usually led by a doctor.

Note: many health professionals and publications use the terms 'medical emergency team' and 'rapid response team' interchangeably. However, the staffing composition of these models may vary between facilities and may include nurse led teams, combined medical and nursing teams, or combinations that include other clinicians such as respiratory therapists.[12]

ICU LIAISON AND CRITICAL CARE OUTREACH (CCO)

The role role of ICU liaison nurses and CCO teams varies, but generally includes:[13]

- provision of critical care services to patients on general wards
- follow up of patients discharged from ICU
- formal and informal education of ward staff
- audit and evaluation of liaison or outreach activity.

ICU liaison nurses and CCO teams are usually trained to provide a rapid emergency response. They also assist in the identification and treatment of high-risk patients on the wards before a critical crisis occurs.

OTHER MODELS

Many facilities do not have access to intensive care nurses or medical specialists to enable a MET or CCO rapid response system. This has prompted the development of other systems for providing emergency assistance such as:

- using nursing or medical staff from an emergency department who are trained in advanced life support
- developing advanced practice nursing roles capable of providing emergency assistance in accordance with statewide health policies and procedures
- using local general practitioners or visiting medical officers
- using local ambulance services.

Once a rapid response system has been decided, facilities should identify and outline the roles and responsibilities of the providers, considering their scope of practice, and include this information in the facility's policy, and education and training programs.

As a minimum, the outline of the roles and responsibilities of rapid response providers should identify:

- who is responsible for ensuring that the equipment for providing emergency assistance will reach the patient
- who is responsible for directing and coordinating the multiple activities and treatments needed when providing emergency assistance
- who is responsible for communicating the consequences of the call to the healthcare team
- who has authority to make transfer decisions and access other clinicians as required
- who is responsible for making treatment-limiting decisions, and how to contact this person
- who is responsible for documenting the care provided
- who is responsible for contacting and discussing clinical deterioration with the patient, family and carer.

The implementation tip on the following page provides one example of the minimum roles and responsibilities of medical emergency team members when providing emergency assistance. An important aspect of these responsibilities is the use of triggers to identify when further escalation of care and communication with an intensivist is required.

All rapid response calls should be used as an opportunity to provide education for ward staff and students.

implementation tip

Example of roles and responsibilities when managing a medical emergency team (MET) call[15]

- Determine the aetiology of the deterioration
- Document the events surrounding the MET call (a preformatted sticker can be placed in the healthcare record for this purpose)
- Organise a management plan and appropriate medical follow up
- Ensure automatic medical referral for a surgical patient subject to a MET call for a medical reason in cases where the patient remains on the ward
- Communicate to the parent unit (or their cover) that the MET call has occurred
- Ensure review of the patient by an intensivist for a patient requiring two MET reviews in a seven day period (compulsory)
- Communicate with the intensivist if any of the following criteria are fulfilled.
  The:
  - patient remains unstable following initial resuscitation
  - patient requires intensive care unit (ICU) or high-dependency unit (HDU) admission
  - patient may require ICU or HDU admission in the future
  - patient has been admitted to ICU or HDU during this hospital admission
  - members of the MET are unsure how to manage the patient (i.e. the members of the MET are worried about the patient).

As part of their roles and responsibilities, rapid response providers need to understand the importance of modelling behaviours that encourage use of the system. All rapid response providers need to approach rapid response calls as an opportunity to educate and support clinicians and students.[16] This approach is vital, as nurses are less likely to activate the rapid response system if they feel unsupported or de-skilled in any way.[10]

practice point

Improving use of the medical emergency team (MET)

A literature review of the factors that affect nurses' effective use of the MET indicated that positive responses or behaviours by MET members towards nursing staff acted as a major encouragement to effective use of the system.[10]

A friendly and approachable manner from MET members also improved ward nurses' recognition of the indicators of early deterioration, leading to earlier MET activation.[10]

implementation tip

Leading successful rapid response teams

Hospitals that quickly and successfully adopted a new rapid response system displayed the following characteristics:[17]

- leadership that was described by nurses as being visibly 'out there', actively seeking input and addressing the nurses' concerns about the rapid response system
- clear unambiguous messages from leaders that the rapid response system was not optional and that it should be activated whenever indicated by the patient's condition
- effective initial training about calling criteria and procedures
- emphasis on supportive working relationships between rapid response providers and ward nurses
- unconditional support from doctors for use of the system.

DEVELOP

INCLUDE DETAILS OF THE RAPID RESPONSE SYSTEM IN THE ESCALATION PROTOCOL AND POLICY

DEVELOP EMERGENCY ASSISTANCE TREATMENT PROTOCOLS

Rapid response systems form part of a facility's escalation protocol. Details of how the system operates should also be included in the facility's escalation policy. This information should include the:

- triggers for emergency assistance
- method for activating the rapid response system
- responses, including who should attend and in what time frame
- roles and responsibilities of each clinician
- evaluation and governance arrangements.

A flow diagram summarising the process for activating the rapid response system should also be included in the escalation protocol and made available in all clinical areas (see *Essential element 2: Escalation of care* for information about escalation policies and protocols).

Treatment protocols and algorithms should be developed to outline the clinical care and therapies for conditions that need emergency treatment. These protocols help clinicians make suitable assessments and implement appropriate, evidence based treatments.

Treatment protocols and algorithms should incorporate national resuscitation guidelines and other sources of current evidence. These protocols and algorithms should be used in education and skill development programs to provide guidance for clinicians who are responsible for providing emergency assistance.

Treatment protocols and algorithms should be developed to outline the clinical care and therapies for conditions that need emergency treatment. These protocols help clinicians make suitable assessments and implement appropriate, evidence based treatments.

practice point

Guidelines to inform treatment protocols

A range of guidelines exist that can be used to inform the development of treatment protocols for rapid response systems.

AUSTRALIAN RESUSCITATION COUNCIL

The Australian Resuscitation Council is a voluntary coordinating body that represents all major groups involved in the teaching and practice of resuscitation. It is sponsored by the Royal Australasian College of Surgeons and the Australian and New Zealand College of Anaesthetists.

The council has produced a variety of basic and advanced life support treatment flow charts and guidelines. These are available to download from **www.resus.org.au**

INTERNATIONAL LIAISON COMMITTEE ON RESUSCITATION

The International Liaison Committee on Resuscitation (ILCOR) was formed in 1992 to provide a forum for liaison between principal resuscitation organisations worldwide. ILCOR undertakes a range of activities, including producing statements that reflect international consensus on specific issues related to resuscitation.

ILCOR's most recent publication, European Resuscitation Council Guidelines for 2010, is based on the most recent International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. These guidelines provide treatment algorithms for resuscitation of babies, children and adults, and represent a widely accepted view on safe and effective resuscitation. The guidelines include information on basic and advanced life support, initial management of acute coronary syndromes, cardiac arrest in special circumstances such as drowning, the principles of education, and ethics in end-of-life decisions.

A copy of the guidelines is available from **www.erc.edu**

THE SURVIVING SEPSIS CAMPAIGN

The Surviving Sepsis Campaign is spearheaded by the European Society of Intensive Care Medicine, International Sepsis Forum and Society of Critical Care Medicine. Its aims are to improve the diagnosis, survival, and management of patients with sepsis. Care bundles and guidelines have been developed with input from international critical care societies, including the Australian and New Zealand Intensive Care Society. While there is controversy regarding some of the specific recommendations,[18–19] the principles of treating shock early, focusing on protocolised resuscitation and appropriate monitoring, and the timely administration of appropriate antibiotics are supported by available evidence. These recommendations may be useful in informing treatment protocols for deteriorating patients in whom sepsis is suspected.

A link to the guidelines and further information is available from **www.survivingsepsis.org**

implementation tip

Medical emergency team (MET) syndromes

A review of the calling criteria and clinical causes of 400 MET calls in a teaching hospital in Australia identified the most common reasons for initiating a call as:[15]

- hypoxia (41%)
- hypotension (28%)
- altered conscious state (23%)
- tachycardia (19%)
- increased respiratory rate (14%)
- oliguria (8%).

Infection, pulmonary oedema and arrhythmias were the most common clinical causes for the calls. This information may guide facilities in developing treatment protocols and algorithms.

RESOURCE

ENSURE ACCESS, AT ALL TIMES, TO A CLINICIAN WHO CAN PRACTISE ADVANCED LIFE SUPPORT

ENSURE PHARMACEUTICALS AND FUNCTIONING EQUIPMENT ARE AVAILABLE TO PROVIDE EMERGENCY ASSISTANCE

Facilities need to ensure that rapid response systems provide access to a clinician who can practise advanced life support. All facilities will need to develop and maintain rosters or systems to enable access to this clinician at all times.

The clinician should be either on site or in close proximity to the acute care facility. Where clinicians with advanced life support skills are located off-site, response times need to be rapid so that patient safety and care is not compromised. This may require early contact of the clinician during episodes of patient deterioration, or if response times are prolonged, the capacity to have the clinician on-site.

Additional nurses and doctors may require training in advanced life support in order to ensure rapid response systems can provide this level of care 24-hours per day and during periods of staff absence, such as unexpected illness. Development of advanced clinical practice roles for rural and remote nurses may also be required to ensure emergency assistance can be provided.

Where clinicians with advanced life support skills are located off site, response times need to be rapid so that patient safety and care is not compromised.

implementation tip

Advanced clinical practice nursing roles

The following web sites provide information related to different advanced clinical practice nursing roles to provide emergency assistance.

Rural adult emergency clinical guidelines, 3rd edition (NSW Health)
www.health.nsw.gov.au/policies/gl/2010/pdf/GL2010_003.pdf

A framework for the intensive care unit liaison nurse in Victorian health services
www.health.vic.gov.au/criticalcare/icu_nurse.pdf

Health management protocols for nurse practitioners: Queensland health facilities
www.health.qld.gov.au/ocno/nurseprac/hmp_qh.asp

Primary clinical care manual 2009, 6th edition (Queensland Health)
www.health.qld.gov.au/pccm

When implementing rapid response systems, facilities need to consider what equipment is required for assessing, monitoring and treating severe deterioration. Consider where the equipment is located, and who is responsible for obtaining and restocking the equipment.

Equipment for providing emergency assistance must be adequately maintained to provide safe and effective emergency assistance. Regular equipment safety checks are essential and should occur frequently, with ongoing monitoring for compliance to ensure that checks are being done. The practice point below demonstrates the importance of monitoring compliance with emergency equipment safety checking procedures.

practice point

Improving performance by changing the way equipment is organised

A hospital undertook an audit of emergency equipment and pharmaceutical safety checking procedures. The audit identified that:

- checks were incomplete and some pharmaceuticals were out of date
- 80% of staff felt it was not their role to 'check the trolley'
- there was often a 2-hour delay between use and restocking, as the trolley was located away from the ward
- equipment was messy and difficult to find.

The emergency trolley was reorganised and equipment refined as part of a quality improvement project. Additional trolleys were purchased and emergency equipment was stored in the same location and manner in every trolley throughout the hospital. Photographs of the trolley layout were provided to help staff with safety checking processes.

The project resulted in:

- a cost saving of $4260.60 from the review of equipment and pharmaceuticals
- 90% compliance with safety checks by staff
- reduced time taken to check the trolley and equipment, from 2 hours to 14 minutes.

J.Wade, Cabrini Health, personal communication, 2010

implementation tip

Emergency equipment

An alternative option to storing all emergency equipment and pharmaceuticals on cardiac arrest trolleys is for rapid response team members to bring equipment relevant to their advanced roles in a back-pack or trolley.

The perceived advantage of this approach is that rapid response system members can:

- regularly review equipment needs
- ensure adequate stocks
- guarantee that equipment is always ready and available for use.

The following image shows one example of an emergency trolley for providing emergency assistance. The list of the trolley contents is available on the Commission's web site.

D. Jones, Austin Hospital, personal communication, 2010

EDUCATE

EDUCATE RAPID RESPONSE PROVIDERS TO PROVIDE EMERGENCY ASSISTANCE

EDUCATE RAPID RESPONSE PROVIDERS IN CLINICAL TEACHING AND MENTORSHIP

Education and training are essential if clinicians are to provide safe and appropriate emergency assistance to deteriorating patients. As a minimum, all clinicians who provide emergency assistance – individually or as part of a team – need education and training that includes information and practical exercises on:

- accessing the clinician trained in advanced life support if they are not already part of the rapid response
- performing a rapid initial assessment of the patient to identify immediately life-threatening conditions
- performing basic resuscitation skills
- undertaking a detailed evaluation of the crisis
- using monitoring and other equipment
- initiating therapies, either within the scope of practice or in consultation with another suitably qualified clinician
- communication and teamwork
- considering legal and ethical issues related to emergency assistance, treatment-limiting decisions, advance care directives and end-of-life care
- recognising clinical conditions that may require patient transfer to another clinical area or facility.[11,15,20]

The education and training should include theory and some form of simulation or supervised clinical activity to ensure that clinicians are proficient in the clinical skills required to provide emergency assistance.[20] Rural and remote facilities that do not have access to simulation-based training may consider developing partnerships with larger facilities that enable clinicians to access their services on a regular basis to maintain their emergency skills.

Knowledge and skill retention declines within three to six months of basic and advanced life support training.[20] Clinicians need refresher training to maintain knowledge and skills, although the optimal frequency for this training is still unclear.[20] Facilities need to either develop processes for identifying clinicians who need retraining (such as through frequent assessment of performance), or develop regular mandatory training schedules to ensure the knowledge and skills to provide emergency assistance are maintained.[20]

practice point

Advantages of simulation training

Simulation is one method for training clinicians in the provision of emergency assistance. Advantages include the following:[21]

- *'No risk to patients*
- *Many scenarios can be presented, including uncommon but critical situations in which a rapid response is needed*
- *Participants can see the results of their decisions and actions; errors can be allowed to occur and reach their conclusion (in real life a more capable clinician would have to intervene)*
- *Identical scenarios can be presented to different clinicians or teams*
- *The underlying causes of the situation are known*
- *With mannequin based simulators clinicians can use actual medical equipment, exposing limitations in the human-machine interface*
- *With full re-creations of actual clinical environments complete interpersonal interactions with other clinical staff can be explored, and training on teamwork, leadership, and communication provided*
- *Intensive and intrusive recording of the simulation session is feasible, including audiotaping, videotaping, and even physiological monitoring of participants (such as electrocardiography or electroencephalography); there are no issues of patient confidentiality – the recordings can be preserved for research, performance assessment, or accreditation.'*

implementation tip

Debriefing and calls for emergency assistance

Debriefing is a technique to assist individuals and teams to reflect on and improve performance. It is focused on the needs of the participants and is designed to be non-threatening. Teams should consider including debriefing practice during training, as well as after calls for emergency assistance, to review and improve performance.

Clinicians who are responsible for providing advanced life support will need to gain accreditation and proficiency in these clinical skills. Various training programs are available for advanced life support accreditation. Links to some of these courses are provided in the implementation tip below.

implementation tip

Advanced life support

The following web sites have information on advanced life support education and training. Many public and private health services also provide advanced life support training.

Australian Resuscitation Council **www.resus.org.au**

Queensland Ambulance Service **www.ambulance.qld.gov.au/firstaid/medical.asp**

The College of Nursing **www.nursing.edu.au/Home**

Australian College of Critical Care Nurses **www.acccn.com.au**

Royal Australasian College of Surgeons **www.surgeons.org/racs/education--trainees/skills-training**

Australian and New Zealand College of Anaesthetists **www.anzca.edu.au/trainees/courses**

Australian College of Rural and Remote Medicine **www.acrrm.org.au**

Advanced Paediatric Life Support **www.apls.org.au**

Teamwork and communication are also important for the safe delivery of emergency assistance. All clinicians who provide emergency assistance should have an opportunity to develop and practise these skills. Each rapid response call should be used to reflect on teamwork and communication practices, and be viewed as an opportunity to identify areas and strategies for improvement.

implementation tip

Rating medical emergency teamwork performance

Effective emergency assistance requires technical and non-technical skills such as communication and teamwork.

A non-technical observation tool called the Team Emergency Assessment Measure (TEAM) has undergone pilot testing in Australia and appears to be a valid and reliable tool for assessing teamwork in resuscitation teams.[22] Facilities may like to use this tool when educating and evaluating rapid response system teams.

All rapid response providers have a responsibility to use emergency response calls as an educational opportunity for other health professionals and students. It is important that rapid response providers interact with and teach other clinicians using appropriate techniques and mentoring strategies. This will require education and training, and facilities should therefore encourage rapid response providers to improve their teaching and training skills. Strategies may include attendance at preceptor workshops, or training to run simulation and skill development programs.

EVALUATE

EVALUATE THE EFFECTIVENESS OF THE RAPID RESPONSE SYSTEM

When first implementing a rapid response system, it is important to trial the system before setting a 'go live' date. This process is an important first step for ensuring the system operates as planned. It clarifies whether communication processes are working effectively, and identifies if all members of the system know their roles and responsibilities. A trial will also provide opportunities for further education.

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implementation tip

Rapid response call data collection forms

Good data is crucial to evaluating the effectiveness of rapid response systems (see *Essential element 7: Evaluation, audit and feedback*). Rapid response call data collection must be a streamlined process. If data collection forms are poorly designed or overwhelmingly detailed, compliance in filling them out may be poor and the quality of data may be compromised.

To optimise compliance with data collection about rapid response calls, you should:

- ensure data collection forms are quick and easy to complete (e.g. use tick boxes)
- ensure data collection forms are readily available
- assign responsibility for completing data collection forms to a specified member of the rapid response team
- design the form to collect information in the order that it is gathered (e.g. according to the handover or physical assessment framework in use).

An example of a rapid response team data collection form can be found on the Commission's web site.

Many studies have identified that rapid response systems are often underused by staff, delaying patients' access to emergency assistance.[10] Therefore, evaluation should include process measures (i.e. is the system performing as expected or desired?) and outcome measures (i.e. did the system have an impact on patient outcomes?).[11]

Process measures may include:

- appropriateness of the trigger thresholds for activating the rapid response system (see *Essential element 2: Escalation of care* for further details)
- reasons for triggering activation (this may inform the development of treatment protocols)
- failures or delays in activating the rapid response system (e.g. number of cardiac arrests and unplanned transfers to higher levels of care where the system should have been activated, but was either not activated or activation was delayed)
- time from activation of the rapid response system to response (this will be particularly useful during early implementation of the system)
- transfer times from ward to higher level care
- team performance and clinician satisfaction with the rapid response system
- daily variations in calls to the rapid response system (e.g. time of day and day of the week that calls are made).

Outcome measures may include:

- number of rapid response system calls
- adverse events and clinical incidents or near misses
- number of rapid response system calls to patients within 24 hours of admission
- cardiac arrest rates
- number of deaths in patients who do not have a 'not for resuscitation order' or other treatment limitation
- number of unplanned transfers to higher level care
- number of intensive care unit readmissions
- number of repeat rapid response system calls for the same patient.

Many of these outcome measures are often reported per 1000 hospital admissions or separations. This enables comparisons between organisations and the current literature.

Evaluation of the rapid response system should also include review of equipment, restocking practices and compliance with emergency treatment protocols and algorithms. As a minimum, emergency assistance treatment protocols and algorithms should be evaluated annually to ensure compliance with current national guidelines and evidence.

Specifications for some quality measures that can be used when evaluating rapid response systems are available in Appendix B.

implementation tip

ILCOR data collection recommendations

In 2007, the International Liaison Committee on Resuscitation (ILCOR) developed a consensus statement identifying the core data elements for monitoring, reporting and conducting research on medical emergency teams, critical care outreach and rapid response systems. This information is designed to help hospitals collect the most meaningful data to optimise system interventions and improve patient outcomes.

A link to this data collection tool is included in Appendix C.

why this task is important

This task is needed because:

- rapid response systems are not always activated, despite patients showing signs of severe clinical deterioration
- poor use of rapid response systems places patients at risk of increased mortality and morbidity
- clinical care can be fragmented if clinicians are not aware of their roles and responsibilities when providing emergency assistance.

Patients whose condition is deteriorating need timely and appropriate emergency care. There should be a seamless transition in care between the healthcare team – who are familiar with the patient's clinical problems, preferences and treatment requirements – and clinicians who provide emergency assistance.

Rapid response systems need to operate as an extension of the care provided by individual clinical areas and clinicians to ensure patients receive appropriate care. However, rapid response systems can be met with scepticism, and are often underused.[11]

Effective use of rapid response systems requires all members of the healthcare team to understand the system's purpose and benefits. Nurses with less experience in emergency situations are more anxious about activating rapid response systems.[10,23] Similarly, clinicians may respond negatively towards staff who activate rapid response systems if they do not understand the purpose and benefits for patients.[23]

Effective use of rapid response systems requires all members of the healthcare team to understand the system's purpose and benefits.

learning from coronial inquests

Dangers of not understanding the rapid response system

Susannah McLevie was a 38-year-old woman who developed a post-partum bacterial infection. She developed fever, hypotension and severe pain following the delivery of her healthy baby girl. Despite meeting the hospital medical emergency call criteria on at least two occasions, no call was made. Within 28 hours of delivering her baby, Susannah died after attempts at resuscitating her from asystolic arrest were unsuccessful.

The nurse reported she 'was not aware of the Code Blue criteria and because the deceased had not collapsed and was able to talk, she did not consider that her condition was sufficiently serious to warrant the calling of a medical emergency.'[24]

'I recommend that training for both medical and nursing practitioners should provide greater focus on appreciation of the significance of vital sign observations and a proper understanding of the criteria which constitute a medical emergency.'[24]

Effective teamwork requires good communication, respect and courtesy. Rapid response providers must operate in partnership with the healthcare team to ensure that patients receive the timely emergency assistance and ongoing care they require. Poor communication between rapid response providers and other clinicians, or uncooperative behaviour, will reduce team effectiveness and potentially hinder the rapid response.

In some cases, rapid response systems may be activated without the healthcare team being made aware of the call. This has the potential to fragment care, and places patients at risk of delays in follow-up care and treatments (e.g. review and treatment of diagnostics such as pathology and X-rays). These delays can contribute to further episodes of clinical deterioration.

case review

Fragmented patient care

Mr Alan Richards was a 59-year-old man admitted for repair of his inguinal hernia. Several hours after his return from theatre, Mr Richards' blood pressure dropped to 85/35 mmHg and his heart rate increased. Nurses activated the rapid response system. Mr Richards was assessed, found to be hypovolaemic and was administered a bolus of IV fluids; his current IV fluid rate was also increased. His blood pressure improved to 105/65 mmHg. The rapid response team documented their actions in Mr Richards' healthcare record, but they did not inform the attending medical officer or healthcare team of the call.

Mr Richards' IV fluids finished and nurses started the next bag. Four hours later, Mr Richards' blood pressure had dropped to 82/37 mmHg and he began to complain of central chest heaviness. Nurses activated the rapid response system again; another bolus of IV fluids was administered, which resolved his chest heaviness, and bloods for pathology were taken. The attending medical officer and the healthcare team were then contacted. Mr Richards' ongoing fluid management plan was revised at this time. Another medical review was scheduled in one hour to monitor his response and review his pathology results.

It is possible that Mr Richards may not have needed the second rapid response call if the attending medical officer or healthcare team had been informed of the first call, which would have provided an opportunity to review his response and the ongoing management of IV fluids.

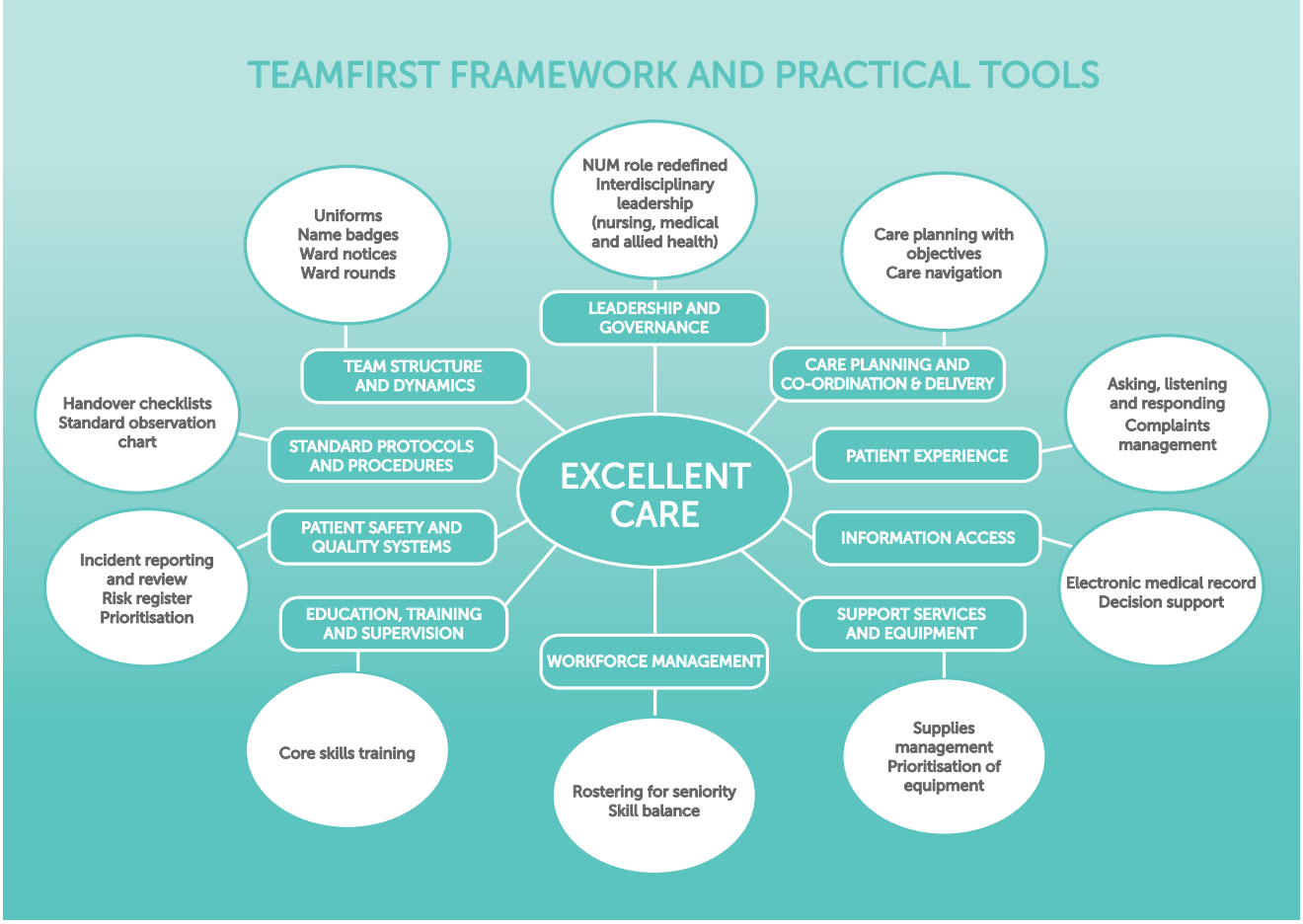
It is important to consider practical ways to foster effective team relationships between rapid response providers and healthcare teams on the ward. A lack of teamwork can contribute to poor outcomes for patients.

It is important to consider practical ways to foster effective team relationships between rapid response providers and healthcare teams on the ward. A lack of teamwork can contribute to poor outcomes for patients. In New South Wales, the coroner's report into the death of a 16–year-old girl, Vanessa Anderson, triggered a Special Commission of Enquiry led by Peter Garling.[25] Commissioner Garling made a number of recommendations that referred to the need for healthcare professionals to develop more effective ways of working in teams. He said in his report that 'a new model of teamwork will be required to replace the old individual and independent "silos" of professional care.'[25]

practice point

TeamFirst: A framework for effective teams

Healthcare teams are complex, and teamwork can be compromised by issues such as uncertainty regarding role expectations or failure to use common processes. It can be helpful to map the interrelated components of healthcare provision and use practical tools to foster effective teamworking practices. The TeamFirst framework illustrated below was developed as a way to support healthcare teams to identify and develop ways to work together more effectively. It has been successfully implemented in a number of hospitals.



C. Pain, NSW Clinical Excellence Commission, personal communication, 2011

how to complete this task

DECIDE | DEVELOP | RESOURCE | EDUCATE | EVALUATE

task 2 – ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team

DECIDE	▶ ▶ ▶	Define the roles and responsibilities of clinicians who activate the rapid response system
DEVELOP	▶ ▶ ▶	Develop agreed communication processes and include in the escalation policy or similar document
RESOURCE	▶ ▶ ▶	Ensure there is a health professional with overall responsibility for the rapid response system
EDUCATE	▶ ▶ ▶	Educate clinicians on use of the rapid response system
EVALUATE	▶ ▶ ▶	Include rapid response providers in evaluation processes Evaluate clinicians' awareness and perception of the rapid response system

DECIDE

DEFINE THE ROLES AND RESPONSIBILITIES OF CLINICIANS WHO ACTIVATE THE RAPID RESPONSE SYSTEM

It is important for facilities to identify the roles and responsibilities of ward nurses and the attending medical officer or team when developing rapid response systems.

Each member of the healthcare team has different roles and responsibilities after activation of the rapid response system. Identifying and defining these roles and responsibilities may help to reduce confusion, promote teamwork, and ensure emergency assistance and ongoing patient care is provided.

It is important for facilities to identify the roles and responsibilities of ward nurses and the attending medical officer or team when developing rapid response systems. This process should involve clinicians from areas where the rapid response system will operate, as well as rapid response providers.

Important roles and responsibilities of ward nurses, attending medical officers and teams to be included in escalation policies or similar documents may include:[1]

- remaining with the patient and starting further assessments, basic life support and other therapies while waiting for the rapid response team to arrive
- providing a structured handover of information on the clinical condition of the patient and reasons for activating the system to the clinicians providing emergency assistance
- ensuring the attending medical officer or team attends, where possible, to assist and to learn from the rapid response team.

This information should also be incorporated into education programs and orientation sessions for rapid response systems.

implementation tip

Documenting roles of clinicians who activate the rapid response system

Consider displaying agreed roles and responsibilities at the point of care. One way of doing this could be to provide clinicians with cards that can be hung on a lanyard outlining the responses required after activation of the system. An example of such a card follows.

Actions to consider while awaiting assistance
NURSE TO CONSIDER:
• Give O^2
• Sit patient upright
• Assess level of consciousness
• Check blood sugar level
• 12 lead ECG
• Review analgesia
• Review drug charts
• Calculate fluid balance

Actions to consider while awaiting assistance
DOCTOR TO CONSIDER:
• Review vital sign trends
• CPR status
• IV access
• Fluids
• ABG
• Full bloods
• CXR
• Electrolyte replacement

DEVELOP

DEVELOP AGREED COMMUNICATION PROCESSES AND INCLUDE IN THE ESCALATION POLICY OR SIMILAR DOCUMENT

Effective communication processes promote teamwork and play an important role in ensuring rapid response systems are seamlessly integrated into usual processes of care. Communication is discussed in more detail in *Essential element 4: Clinical communication*.

Rapid response providers and attending medical officers and teams need to agree on processes for communication before implementing rapid response systems. It is important for rapid response providers to notify the attending medical officer or team as soon as practical after a rapid response call. This ensures patient care is planned in partnership with the clinicians who have primary responsibility for the patient, and who are familiar with the patient's clinical problems, preferences and treatments.

When developing agreed communication processes, health professionals should consider:

- which rapid response provider will communicate with the attending medical officer or team
- the minimum amount of information to be communicated
- what to do if they cannot contact the medical officer or team.

Rapid response providers and clinicians on the ward should use a structured communication tool to ensure effective transfer of information. This may include use of a mnemonic device or documentation tool. Verbal communication and documentation in the patient's healthcare record must be comprehensive, outlining the emergency assistance provided, abnormal results, results pending, and an agreed monitoring and management plan.

implementation tip

Communicating the activation of a medical emergency team (MET) call

This is an example of a form that is is printed as an A5 sticker to be placed in the patient's notes after the activation of a MET call.

This patient had a MET call at:

_ _ : _ _ hours on _ _ /_ _ /_ _ _ _

Attended by: ICU Reg Dr _____
ICU RN _____
Med Reg Dr _____

Reason for call:

Plan: Transfer to ICU / HDU / Other (circle)
Remain on the ward and for follow up by:

Dr: Position:

Parent unit notified (Dr _____) at:

_ _ : _ _ hours on _ _ /_ _ /_ _ _ _

Issues to be addressed by parent unit:
1.
2.
See full MET notes below...

Name & Position (eg HMO/Reg):
Signature

D. Jones, Austin Hospital, personal communciation, 2011

practice point

Example of a rapid response system communication agreement

There are two members on this hospital's rapid response team. During usual hospital business hours, the team comprises a doctor and a nurse. After hours, two registered nurses – one of whom is trained in advanced life support – form the rapid response team.

The rapid response team registered nurse:

- listens to handover from ward staff on why the call has been made
- contacts or delegates responsibility to someone for contacting the attending medical officer or healthcare team to notify them of the call, and inform them that their attendance at the patient's bedside is required
- provides handover to the receiving ward/clinical area or retrieval team if the patient requires transfer, using the structured mnemonic ISBAR (introduction, situation, background, assessment, recommendation).

The rapid response system doctor or advanced life support nurse:

- listens to handover from ward staff on why the call has been made
- liaises with the attending medical officer (in person or via phone) as soon as possible to report assessment findings and treatments
- documents emergency assessment, treatments and ongoing plans in the patient's healthcare record
- provides handover to the receiving ward/clinical area or retrieval team if the patient requires transfer, using the structured mnemonic ISBAR.

The registered nurse from the ward responsible for the patient:

- provides handover to the rapid response team on their arrival using the structured mnemonic ISBAR
- delegates responsibility to someone for contacting the patient's family or carer
- documents all treatments provided during the rapid response call on the resuscitation form
- documents the events leading up to the rapid response call in the patient's healthcare record.

The attending medical officer or healthcare team must ensure that they document sufficient information in the patient's healthcare record as part of the general care of the patient. This enables rapid response providers to identify the patient's history, presenting and ongoing problems, and any treatment-limiting decisions that have been made.

No system is without errors or problems. Therefore, it is important that rapid response providers and the healthcare team agree in advance on processes for communicating and addressing any issues that may arise. Facilities should develop communication processes to enable clinicians to discuss the management of patient deterioration and operation of the rapid response system. This may include regular meetings, or less formal processes, such as informal ward visits. This planned approach may help promote a culture of teamwork and help to quickly resolve any problems that may arise.

No system is without errors or problems. Therefore, it is important that rapid response providers and the healthcare team agree in advance on processes for communicating and addressing any issues that may arise.

RESOURCE

ENSURE THERE IS A HEALTH PROFESSIONAL WITH OVERALL RESPONSIBILITY FOR THE RAPID RESPONSE SYSTEM

Ensuring there is a health professional with responsibility for the day-to-day operation of the rapid response system provides a mechanism for making sure resources, education and evaluation are considered, and resolving any immediate problems with the system. This is an essential part of the clinical governance framework for recognition and response systems. More detail about the governance requirements for recognition and response systems is included in *Essential element 5: Organisational supports*.

The responsible health professional also plays a key role in ensuring successful integration of the rapid response system, acting as a conduit between healthcare teams and the rapid response system.

Ensuring there is a health professional with responsibility for the day-to-day operation of the rapid response system provides a mechanism for making sure resources, education and evaluation are considered, and resolving any immediate problems with the system.

EDUCATE

EDUCATE CLINICIANS ON USE OF THE RAPID RESPONSE SYSTEM

All members of the healthcare team should understand the importance and benefits of activating the rapid response system when they identify clinical deterioration. Similarly, clinicians also need to know:

- when to activate the rapid response system
- how to activate the rapid response system
- what to do while waiting for the emergency response
- how to assist the rapid response providers.

Education and training programs should consider the role and clinical skills associated with each clinician's scope of practice.

All clinicians working in acute care facilities should receive this education when they begin their employment. Rapid response systems are activated more often when clinicians receive ongoing education on the principles, theory, and purpose of the system.[10] Facilities should therefore provide ongoing education on the use of the rapid response system, such as during morbidity and mortality meetings, peer review, and other educational forums.

Rapid response systems are activated more often when clinicians receive ongoing education on the principles, theory and purpose of the system.

EVALUATE

INCLUDE RAPID RESPONSE PROVIDERS IN EVALUATION PROCESSES

EVALUATE CLINICIANS' AWARENESS AND PERCEPTION OF THE RAPID RESPONSE SYSTEM

Including rapid response providers in evaluation processes – such as clinical reviews, morbidity and mortality meetings, and other peer review processes – promotes a team approach to managing clinical deterioration and confirms the important role that rapid response providers play in providing care to patients.

This team approach provides opportunities to draw from each clinician's areas of expertise, helps all parties to understand how various clinical areas operate, and enables communication and identification of solutions for any system problems that may arise.

Ensuring clinicians have access to evaluation data from rapid response systems is also important. Data feedback provides clinicians with an opportunity to engage with the system, and may help promote ownership of any problems that arise from evaluation of the system.

One of the most important measures of the success of a rapid response system is its use by clinical areas. Many studies describe the behaviours, attitudes and circumstances that influence nurses' use of rapid response systems. The practice point on the following page describes some of the factors that encourage and inhibit use of rapid response systems – this may help facilities communicate desired behaviours to health professionals. A staff evaluation survey based on these factors is available on the Commission's web site.

This team approach provides opportunities to draw from each clinician's areas of expertise, helps all parties to understand how various clinical areas operate, and enables communication and identification of solutions for any system problems that may arise.

practice point

Factors that have an impact on nurses' effective use of the medical emergency team (MET)

Facilities should strive to achieve a culture that encourages and rewards nurses for activating the rapid response system. The following factors either encourage or discourage use of the MET by nurses.[10]

FACTORS THAT ENCOURAGE NURSES TO ACTIVATE THE MET

- Ongoing education on the MET system
- Expertise from clinical experience and more than five years' clinical experience
- Positive responses or behaviours by MET members
- Positive support by ward doctors
- Positive support by ward nurses
- Familiarity and knowledge of the patient
- Heavy workload that encouraged nurses to call for additional assistance.

FACTORS THAT DISCOURAGE NURSES ACTIVATING THE MET

- Lack of education on the MET system
- Inexperience, lack of confidence and less than five years' clinical experience
- Negative responses or behaviours by MET members
- Allegiance to the attending medical officer or team and/or negative responses or behaviours demonstrated by the attending medical officer or team in relation to MET activation
- Negative responses from ward nurses
- Unfamiliarity with the patient, which may delay activation of the MET
- High nurse stress levels as a result of unmanageable workloads.

summary of tasks and actions for essential element 3

Task	What is required?	Who is responsible?	Consensus statement recommendations	National safety and quality health service standards actions
task 1 **Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating**	**DECIDE** Decide which rapid response system model to implement Decide on the roles and responsibilities of rapid response providers	Health service executive and owners Health service managers Health professionals with responsibility for policy or quality improvement Clinicians	3.1 Some form of rapid response system should exist to ensure that specialised and timely care is available to patients whose condition is deteriorating 3.3 The nature of the rapid response system needs to be appropriate to the size, role, resources and staffing mix of the acute health care facility 3.4 The clinicians providing emergency assistance as part of the rapid response system should: • be available to respond within agreed timeframes. • be able to assess the patient and provide a provisional diagnosis • be able to undertake appropriate initial therapeutic intervention • be able to stabilise and maintain the patient pending definitive disposition	9.1.2 Policies, procedures and/or protocols for the organisation are implemented in areas such as: • establishment of a rapid response system
	DEVELOP Include details of the rapid response system in the escalation protocol and policy Develop emergency assistance treatment protocols	Health service managers Health professionals with responsibility for policy or quality improvement Clinicians	3.2 Criteria for triggering the rapid response system should be included in the escalation protocol 3.4 The clinicians providing emergency assistance as part of the rapid response system should: • be able to undertake appropriate initial therapeutic intervention • be able to stabilise and maintain the patient pending definitive disposition	9.5.1 Criteria for triggering a call for emergency assistance are included in the escalation policies, procedures and/or protocols

summary of tasks and actions for essential element 3

Task	What is required?	Who is responsible?	Consensus statement recommendations	National safety and quality health service standards actions
task 1 **Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating**			3.6 The clinicians providing emergency assistance should have access to a staff member of sufficient seniority to make treatment-limiting decisions. Where possible, these decisions should be made with input from the patient, family and the attending medical officer or team 3.7 In cases where patients need to be transferred to another site to receive emergency assistance, appropriate care needs to be provided to support them until such assistance is available	
	RESOURCE Ensure access, at all times, to a clinician who can practise advanced life support Ensure pharmaceuticals and functioning equipment are available to provide emergency assistance	Health service executive and owners Health service managers Clinicians	3.5 As part of the rapid response system there should be access, at all times, to at least one clinician, either on-site or in close proximity, who can practise advanced life support 5.7 Organisations should have systems in place to ensure that the resources required to provide emergency assistance (such as equipment and pharmaceuticals) are always operational and available	9.6.2 A system is in place for ensuring access at all times to at least one clinician, either on-site or in close proximity, who can practise advanced life support
	EDUCATE Educate rapid response providers to provide emergency assistance Educate rapid response providers in clinical teaching and mentorship	Health service managers Educators Clinicians	3.9 All opportunities should be taken by the clinicians providing emergency assistance to use the call as an educational opportunity for ward staff and students 6.3 As part of the rapid response system, competency in advanced life support should be ensured for sufficient clinicians who provide emergency assistance to guarantee access to these skills according to local protocols	1.4.1 Orientation and ongoing training programs provide the workforce with the skill and information needed to fulfil their safety and quality roles and responsibilities 1.4.2 Annual mandatory training programs to meet the requirements of these standards 1.4.4 Competency-based training is provided to the clinical workforce to improve safety and quality

summary of tasks and actions for essential element 3

Task	What is required?	Who is responsible?	Consensus statement recommendations	National safety and quality health service standards actions
task 1 **Provide a rapid response system capable of delivering specialised, timely emergency assistance to patients whose condition is deteriorating**				9.6.2 A system is in place for ensuring access at all times to a least one clinician, either on-site or in close proximity, who can practise advanced life support
	EVALUATE Evaluate the effectiveness of the rapid response system	Health professionals with responsibility for policy or quality improvement Health service managers Clinicians	3.11 Events surrounding the call for emergency assistance and actions resulting from the call should be documented in the healthcare record and considered as part of ongoing quality improvement processes 7.1 Data should be collected and reviewed locally and over time regarding the implementation and effectiveness of recognition and response systems 7.4 The following data should be collected for each call for emergency assistance that is made to the rapid response system: • patient demographics • date and time of call, response time and stand down time • the reason for the call • the treatment or intervention provided • outcomes of the call, including disposition of the patient	9.2.1 Feedback is actively sought from the clinical workforce on the responsiveness of the recognition and response systems 9.5.2 The circumstances and outcome of calls for emergency assistance are regularly reviewed
task 2 **Ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team**	**DECIDE** Define the roles and responsibilities of clinicians who activate the rapid response system	Health professionals with responsibility for policy or quality improvement Health service managers Clinicians	6.2 All doctors and nurses should be able to: • initiate appropriate early interventions for patients who are deteriorating • respond with life-sustaining measures in the event of severe or rapid deterioration, pending the arrival of emergency assistance	1.3.1 Workforce are aware of their delegated safety and quality roles and responsibilities 1.3.3 Agency or locum workforce are aware of their designated roles and responsibilities

summary of tasks and actions for essential element 3

Task	What is required?	Who is responsible?	Consensus statement recommendations	National safety and quality health service standards actions
task 2 **Ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team**			• communicate information about clinical deterioration in a structured and effective way to the attending medical officer or team, to clinicians providing emergency assistance, and to patients, families and carers	
	DEVELOP Develop agreed communication processes and include in the escalation policy or similar document	Health professionals with responsibility for policy or quality improvement Health service managers Clinicians	3.8 When a call is made for emergency assistance, the attending medical officer or team should be notified as soon as practicable that the call has been made, and where possible they should attend to support and learn from the clinicians providing assistance 3.10 The clinicians providing emergency assistance should communicate in an appropriate, detailed and structured way with the attending medical officer or team about the consequences of the call, including documenting information in the health care record	9.1.2 Policies, procedures and/or protocols for the organisation are implemented in areas such as: • communication about clinical deterioration
	RESOURCE Ensure there is a health professional with overall responsibility for the rapid response system	Health service boards, executives and owners Health service managers	5.6 A formal governance process (such as a committee) should oversee the development, implementation and ongoing review of recognition and response systems	9.6.2 A system is in place for ensuring access at all times to at least one clinician, either on-site or in close proximity, who can practise advanced life support

summary of tasks and actions for essential element 3

Task	What is required?	Who is responsible?	Consensus statement recommendations	National safety and quality health service standards actions
task 2 **Ensure rapid response systems operate in partnership with, and as an extension of, the healthcare team**	**EDUCATE** Educate clinicians on use of the rapid response system	Clinicians Educators Health service managers	6.1 All clinical and non-clinical staff should receive education about the local escalation protocol relevant to their position. They should know how to call for emergency assistance if they have any concerns about a patient, and know that they should call under these circumstances. This information should be provided at the commencement of employment and as part of regular refresher training	1.4.1 Orientation and ongoing training programs provide the workforce with the skill and information needed to fulfil their safety and quality roles and responsibilities 1.4.2 Annual mandatory training programs to meet the requirement of these standards 1.4.3 Locum and agency workforce have the necessary information, training and orientation to the workplace to fulfil their safety and quality roles and responsibilities 1.4.4 Competency-based training is provided to the clinical workforce to improve safety and quality
	EVALUATE Include rapid response providers in evaluation processes Evaluate clinicians' awareness and perception of the rapid response system	Health service managers Health professionals with responsibility for policy or quality improvement Clinicians	7.1 Data should be collected and reviewed locally and over time regarding the implementation and effectiveness of recognition and response systems 7.8 As part of the implementation of new systems, feedback should be obtained from frontline staff about the barriers and enablers to change. Issues and difficulties regarding implementation should be considered for different settings	9.2.1 Feedback is actively sought from the clinical workforce on the responsiveness of the recognition and response systems 9.5.2 The circumstances and outcome of calls for emergency assistance are regularly reviewed

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