quick-start guide
to the implementation of
essential elements 5, 6, 7 and 8
ORGANISATIONAL PREREQUISITES

national consensus statement:

essential elements for recognising & responding to clinical deterioration

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE
Quick-start Guide to the Implementation of
Essential Element 5, 6, 7 and 8: Organisational Prerequisites

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INTRODUCTION

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LINKS TO RESOURCES
Early recognition of clinical deterioration, followed by prompt and effective action, can minimise adverse outcomes such as cardiac arrest, and decrease the number of interventions required to stabilise patients whose condition deteriorates in hospital.¹

**each essential element describes a number of specific systems and processes of care that need to be in place to successfully recognise and respond to clinical deterioration**

The National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration (the consensus statement) describes eight elements that are essential for a prompt and reliable response to clinical deterioration. Each essential element describes a number of specific systems and processes of care that need to be in place to successfully recognise and respond to clinical deterioration. In April 2010, all Australian health ministers endorsed the consensus statement as the national approach for recognising and responding to clinical deterioration in acute care facilities in Australia.
using the consensus statement

The consensus statement guides facilities in developing and implementing recognition and response systems according to their local circumstances. The focus of these systems is to ensure that all patients who deteriorate receive appropriate and timely treatment. Facilities may need additional resources such as equipment, personnel, education and training to ensure patients receive appropriate and timely care.

quick-start guides to implementation

This series of quick-start guides has been developed to help people to rapidly understand and implement the essential elements. Implementing the tasks in these guides will help to ensure that the essential elements are in operation and working effectively.

A comprehensive implementation guide (available on the Commission’s web site: www.safetyandquality.gov.au) provides more detailed information, resources and examples.

using the quick-start guides

The quick-start guides are structured around an action framework which is designed to help you answer the five key questions and complete each task for each element.

- Do health professionals agree on the basis for the task, the best way to perform the task, and who is responsible?
- Are the necessary processes and policies in place to complete the task?
- Does the facility have the necessary resources to complete the task?
- Is the clinical and non-clinical workforce educated about the importance of the task?
- Does the facility conduct audits, reviews or evaluations to ensure the task is performed properly?
introduction

The types of actions included within this framework and the barriers these actions address are summarised below.

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Lack of agreement
Lack of process/policy
Lack of resources and tools
Lack of knowledge
Lack of monitoring and evaluation

Use the action framework to help you complete a self-assessment of your clinical area or facility and to develop an action plan for implementation. Self-assessment and action planning tools can be downloaded from:

www.safetyandquality.gov.au
essential element 5
ORGANISATIONAL SUPPORTS

the problem

Systems for recognising and responding to clinical deterioration will not be successful or sustainable without organisational support and executive and clinical leadership.

Lack of effective clinical governance frameworks may reduce a facility’s ability to identify risks, and to monitor, maintain and improve recognition and response systems.

goals of this essential element

Systems for identifying risks, and evaluating and continuously improving recognition and response systems, are established within facilities.

Accountability for development, evaluation and improvement of recognition and response systems is clearly identified within a facility.

tasks

There is one key task to complete for this essential element.

1. Provide a clinical governance framework to support systems for recognising and responding to clinical deterioration.

for this task you will need to:

• identify who has a role in developing a clinical governance framework, and what that role is

• use the self-assessment and planning tool (on the Commission’s web site) to identify gaps in your clinical governance systems and prioritise your changes

• use the results of your self-assessment to complete an action plan for your ward or facility

• use the five step action framework – Decide, Develop, Resource, Educate, Evaluate – to guide you through implementation.

common terms used in this essential element

Clinical governance: a framework for ensuring ‘organisations are accountable for continuously improving the quality of their services and safe-guarding high standards of care. This is achieved by creating an environment in which there is transparent responsibility and accountability for maintaining standards and by allowing excellence in clinical care to flourish.’

Continuous improvement: ‘systematic, ongoing efforts to raise an organisation’s performance, measured against a set of standards or indicators.’
why this task is important

Each healthcare facility in Australia is responsible for ensuring that recognition and response systems are developed, implemented and operating as planned within a facility. A facility’s clinical governance framework provides the mechanism for this. These frameworks provide systems for: accountability for resources; evaluation; education; policy development; and system improvements. They also allow clinicians, managers, consumers, patients, families and carers to share responsibility for planning, developing and delivering safe, high-quality care.

Good governance systems focus organisations on overall performance and delivery of services or programs, and on ensuring the requirements of the law, regulations, published standards and community expectations of probity, accountability and openness are met.
How to Complete Task 1

**Design**

**Decide Where Responsibility for Clinical Governance of Recognition and Response Systems Lies Within the Facility**

Health service executives need to identify suitable advisory committees or individuals and form clinical governance frameworks that allow recognition and response systems to be developed, monitored and continuously improved. The frameworks may include one or more individuals or committees (such as a patient safety officer, quality and safety committee, or a resuscitation committee) that oversee some or all of the components of the recognition and response system.

A useful strategy for ensuring advisory clinical governance frameworks are in place is to map key requirements for the governance of recognition and response systems against existing committees or individuals with clinical governance responsibilities. If no suitable advisory clinical governance framework can be identified, facilities may need to establish new structures or redefine roles and responsibilities within existing governance frameworks.

**Develop Roles and Responsibilities for Health Professionals Operating Within the Clinical Governance Framework**

Once hospital executives have decided where responsibility for clinical governance of recognition and response systems lies within a facility, individual roles and responsibilities should be developed to enable health professionals to carry out the activities of the clinical governance framework.

These activities should meet the key principles from the *National Safety and Quality Health Service Standard 1: Governance for safety and quality in health service organisations*. Table 7 of the implementation guide for the National Consensus Statement (page 244) uses the criteria from this standard and provides examples of activities that facilities should undertake to ensure recognition and response systems are operational and continuously improved.

**Develop Policies for Recognition and Response Systems and Include Them in the Clinical Governance Framework**

One of the key roles of clinical governance frameworks for recognition and response systems is the development, implementation, evaluation and revision of policies. These policies should meet current legislative requirements, be based on clinical evidence (where available), and outline the expected operation and performance of recognition and response systems.

The *National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration* recommends that policies to support recognition and response systems should capture:

- governance arrangements
- specific roles and responsibilities
- communication processes
- resources for the rapid response system, such as staff and equipment
- training requirements
- evaluation, audit and feedback processes
- arrangements with external organisations that may be part of the rapid response system.
Clinicians and managers play a key role in clinical governance frameworks, because they provide input into clinical decision-making, and understand day-to-day care processes and how the patient is treated at the bedside.\textsuperscript{5-6} This type of information is critical, as it helps identify barriers and risks associated with operation of recognition and response systems. Clinicians and managers also play a role in translating agreed policy and plans into practice, making their involvement a key strategy to support improvement activities.\textsuperscript{5}

There is increasing evidence that health systems are safer when consumers, patients, families and carers are involved in healthcare design and delivery. Involving consumers, patients, families and carers in governance frameworks (such as committees and quality improvement teams) will provide insight into aspects of rapid response systems that health professionals may not otherwise consider.\textsuperscript{7}

**Advising on Allocating, Prioritising and Maintaining Resources**

Systems for recognising and responding to clinical deterioration need resources to operate effectively. Clinical governance frameworks should include mechanisms for monitoring resources (e.g. equipment and pharmaceutical logs, staffing profiles). They should also provide advice on using, allocating and prioritising resources. Local performance data, and state and national safety and quality policies and standards, may help prioritise and allocate resources.

Key resources for consideration include:

- **equipment**—e.g. observation charts, emergency equipment, observation and monitoring equipment, pharmaceuticals
- **workforce**—including both the clinical and nonclinical workforce
- **information management tools**—e.g. incident reporting systems and databases
- **education and training**—e.g. provision of emergency assistance, physiological observation monitoring, knowledge of escalation protocols
- **quality activities and measurement of performance**—e.g. tools for measurement and data analysis, release time for clinicians to participate in training.

**Educate**

Ensure health professionals know how to participate and provide input into clinical governance frameworks

It is important to ensure all health professionals can participate in the governance of recognition and response systems, and to provide information on how this participation may occur.
**E D U C A T E**

Strategies that facilities may like to consider include:

- using incident reporting and risk management systems to identify and report problems
- conducting peer-review activities such as mortality and morbidity meetings, and peer review involving individual clinicians; this will help to identify system issues, provide education related to recognition and response systems, and maintain performance and accountability
- developing processes for health professionals to engage with governance committees, such as through attendance at meetings, via written documentation or other processes where discussions can occur (e.g. regular ‘safety walk rounds’)
- advertising membership of governance committees and promoting contact and engagement with this membership; this may be via committee notice boards, staff newsletters, or during orientation programs.

**E V A L U A T E**


Statewide jurisdictions and private hospital groups in Australia may have agreed standards and processes for evaluating clinical governance frameworks for recognition and response systems. Where this is the case, facilities should follow these evaluation requirements. The Australian National Audit Office recommends evaluation of governance frameworks on an ongoing basis, and in detail every two years.³

For services without established evaluation standards, two types of evaluation principles can be applied to clinical governance frameworks: internal and external performance and accountability.⁸

Internal performance and accountability describes how well the clinical governance framework is meeting its objectives and establishing processes to perform its roles and responsibilities. Facilities can evaluate their internal performance and accountability through processes such as:

- monitoring outcome and performance measures against desired goals and targets—have these been reached? Is compliance acceptable?
- evaluating the clinical governance structure to identify if individuals identified in the framework have fulfilled their roles and responsibilities.

Evaluation of internal performance and accountability may include collecting qualitative data, such as through surveying health professionals to obtain their perceptions of how the individuals identified in the governance framework are performing their roles and responsibilities; and process and outcome data, such as the presence of, and compliance with, the policies for which the governance framework is accountable.³

External performance and accountability refers to the ability of clinical governance frameworks to demonstrate that governance arrangements are in place, and that the organisation is performing to agreed standards.³ This could be demonstrated as part of an external accrediting process.⁸
essential element 6
EDUCATION

the problem

Treatment of clinical deterioration will be delayed if clinicians cannot identify and interpret signs of clinical deterioration.

Patients may not receive appropriate treatment if clinicians do not have the knowledge and skills to initiate early interventions for patients who are deteriorating.

Delays in recognising and responding to clinical deterioration can occur if clinicians are unfamiliar with local protocols for escalating care.

goals of this essential element

Clinicians have the necessary skills to assess patients for signs of clinical deterioration.

Patients showing signs of clinical deterioration are identified and receive appropriate and timely treatment.

Clinicians communicate effectively when clinical deterioration occurs and work efficiently as a team to deliver care.

Escalation protocols are used correctly when clinical deterioration occurs.

Clinicians maintain their skills to perform their role(s) within the escalation policy.

tasks

There is one key task to complete for this essential element.

1. Provide education to the clinical and non-clinical workforce to support recognition and response systems.

for this task you will need to:

- identify who has a role in providing education to support recognition and response systems, and what that role is

- use the self-assessment and planning tool (on the Commission’s web site) to identify gaps in your education systems and prioritise your changes

- use the results of your self-assessment to complete an action plan for your ward or facility

- use the five step action framework – Decide, Develop, Resource, Educate, Evaluate – to guide you through implementation.
common terms used in this essential element

Competency-based training: ‘an approach to training that places emphasis on what a person can do in the workplace as a result of training completion.’

Continuing professional development: any educational activity undertaken after the completion of any formal training that assists in the maintenance and development of professional knowledge, technical skills or performance.

Peer review: ‘the evaluation by a practitioner of creative work or performance by other practitioners in the same field in order to assure, maintain and/or enhance the quality of work or performance.’

Simulation training: the imitation of real patients, anatomic regions, clinical tasks, and/or the real life circumstance in which health care is practised, to train practitioners in a range of techniques and skills.

why this task is important

A lack of education and training is a significant factor leading to clinical deterioration going unrecognised, and may delay patients receiving appropriate and timely treatments. The reasons why this occurs are complex, and may include clinicians not having sufficient knowledge, skills or experience to:

- identify the observations and assessments that are needed to detect clinical deterioration
- identify the most appropriate frequencies for measuring observations and assessments
- accurately measure observations and undertake assessments to identify changes and abnormalities
- interpret abnormal physiological observations and assessment findings
- effectively communicate physiological changes, abnormalities and treatment plans
- identify and provide appropriate treatments for altered or abnormal findings
- correctly use track and trigger systems and local escalation protocols
- work effectively and efficiently as part of a team (e.g. when providing basic life support or implementing escalation protocols, or as part of a rapid response team).

Education programs to support recognition and response to clinical deterioration need to address these issues. This education should be consistent with the needs and resources of a facility, and may be standardised within areas, regions or jurisdictions. Effective recognition and response systems in high-performing organisations are supported by intensive, organisation-wide training and education.
### Decide

**Decide what education is required and who should receive this education**

Specific content of education programs should always consider the scope of practice of each participant and be tailored to individual roles and responsibilities. See Table 9 of the implementation guide for the National Consensus Statement (page 269) for details of the key educational requirements suggested for different professional groups.

Facilities may choose to mandate some training programs, or analyse pre-existing knowledge, skills and performance to target education to areas where it is most needed. Information from a facility’s incident management system—such as adverse events and clinical incidents related to recognition and response systems—may also identify areas where specific education is needed.

### Develop

**Develop and/or provide access to education programs to support clinicians to recognise and respond to clinical deterioration**

Education programs may be developed as part of a statewide approach or by individual facilities, depending on agreed governance arrangements, resources and local training needs. All facilities will need to ensure that educational programs are in place (or that health professionals have access to them) and that the programs include information specific to local work practices and policies to support recognition and response to clinical deterioration.

Local information that needs to be included in education programs about recognition and response systems is described below.

- **Physiological observation measurement**: each clinician should be aware of the observations and assessments needed to detect clinical deterioration for common patient groups in their clinical area. Education should also include local processes for developing and updating individual patient monitoring plans.

- **Escalation protocols**: education should include local roles and responsibilities for escalating care, trigger thresholds and responses, and processes for contacting the healthcare team or obtaining emergency assistance. Each clinician should be aware of the types of patients that can be safely managed in their clinical area and when care should be escalated to a higher level locally, or to another facility. The non-clinical workforce should know how to call for assistance if they have concerns about a patient.

- **Rapid response system operation**: local practices may include how to activate the system, location of equipment, and individual roles and responsibilities of rapid response system providers and clinicians on the ward when providing emergency assistance.

- **Communication**: each health professional should receive education on local communication protocols and practices (written and verbal) associated with recognition and response systems.
## DEVELOP

Education programs that may be developed for use across multiple clinical areas or facilities include:

- systematic physical assessment
- understanding and interpreting abnormal physiological observations and assessments
- appropriate early interventions for patients who are deteriorating
- basic life support training
- advanced life support training
- teamwork and communication.

Facilities may need to consider accessing external training programs if specific training programs, such as advanced life support skills, cannot be provided locally.

## RESOURCE

**PROVIDE RESOURCES TO SUPPORT DELIVERY AND ATTENDANCE AT EDUCATION PROGRAMS**

Examples of resources to support delivery and attendance at education programs for recognition and response systems include the following.

- **Equipment:** may include access to resuscitation equipment, training mannequins, observation monitoring and other equipment to support the development and teaching of clinical skills.
- **Tools to support training:** may include educational material, presentations, workshops, competency-based assessment tools, debriefing checklists, case presentations, video or provision of observational feedback on teamwork performance, and participation of patients, families and carers in role play and teaching scenarios.
- **Personnel:** includes educators and other health professionals to deliver education, as well as other staff to relieve clinicians who are required to attend training.
- **Access to external education:** may include access to education programs that a facility cannot provide, such as advanced life support training, or opportunities to attend conferences and workshops. Educational outreach visits to facilities to view successful operation of systems for recognising and responding to clinical deterioration, and undertake training and mentorship, may also be useful.

## EDUCATE

**EDUCATE HEALTH PROFESSIONALS RESPONSIBLE FOR TEACHING AND TRAINING**

Teaching requires health professionals to have a range of skills—such as knowledge of educational theory and adult learning principles—to successfully develop and deliver education programs. Facilities should encourage and support health professionals to develop and improve their educational skills by providing:

- access to accredited training programs, such as postgraduate teaching qualifications, preceptor training, simulation, and ‘train the trainer’ programs
- mentorship and coaching, such as partnering with experienced educators.
EVALUATE EDUCATION PROGRAMS

Evaluation of education programs promotes continuous program improvement and ensures program accountability by demonstrating appropriateness, effectiveness and efficiency.15-16

Evaluation of education programs should cover both the process of delivering the program, as well as the outcomes that have been achieved. Evaluation questions might include whether the program:

- meets the needs of the target audience
- is delivered in a consistent way that matches its aims and objectives
- uses methods of delivery that optimise its impact
- has achieved its short-term aims, such as increasing knowledge or changing attitudes
- has had any impact on clinical practice or patient outcomes.

Methods for conducting evaluation may include questionnaires, observation, self-assessment tools, interviews and focus groups. The method used will depend on the aims of the education program and the purpose of the evaluation.
the problem

New systems need evaluation to establish their efficacy and determine if changes are needed to optimise performance.

Ongoing monitoring of recognition and response systems is also necessary to track changes over time and to ensure that systems operate effectively.

goals of this essential element

All components of recognition and response systems are evaluated to assess if system aims and objectives have been achieved.

Results from evaluation of recognition and response systems are fed back to patients, families and carers; clinical and non-clinical staff; and managers and executives.

Recognition and response systems are continuously improved in response to evaluation data.

tasks

There is one key task to complete for this essential element.

1. Develop evaluation, audit and feedback processes for recognition and response systems.

for this task you will need to:

- identify who has a role in developing evaluation, audit and feedback processes for recognition and response systems, and what that role is
- use the self-assessment and planning tool (on the Commission’s web site) to identify gaps in your evaluation, audit and feedback systems and prioritise your changes
- use the results of your self-assessment to complete an action plan for your ward or facility
- use the five step action framework – Decide, Develop, Resource, Educate, Evaluate – to guide you through implementation

common terms used in this essential element

Audit: a systematic review of clinical care against a pre-determined set of criteria.

Evaluation: a systematic analysis of the merit, worth or significance of an object, system or program.

Peer review: “the evaluation by a practitioner of creative work or performance by other practitioners in the same field in order to assure, maintain and/or enhance the quality of work or performance.”

Quality improvement: a cycle of continuous evaluation and adaptation of processes in order to achieve desired outcomes.
task 1 DEvELOP Ev ALUATION , AUDIT AND FEEDbACK PROCESSES FOR RECOGNITION AND RESPONSE SYSTEMS

why this task is important

Evaluation helps identify and drive system improvements; prioritise the allocation of resources; identify educational needs; and develop future policy. Results from evaluation also allow facilities to demonstrate and report on the quality and performance of services to internal and external stakeholders.

Evaluation of new systems is important to examine their efficacy and determine the changes needed to optimise performance. Ongoing monitoring of recognition and response systems is also necessary to track changes over time and to ensure that systems continue to operate effectively. This may require facilities to collect information about processes of care, clinical outcomes, culture, satisfaction, and financial performance, on an ongoing basis. Facilities can then use this information to redesign systems if required, or demonstrate successful implementation and operation of recognition and response systems.

An important part of evaluating systems for recognising and responding to clinical deterioration is engaging frontline staff to obtain information on any barriers to utilising the system. Similarly, evaluating patient, family and carer perspectives and experiences provides valuable information on the personal aspects of care, identifies areas requiring improvement, and may provide solutions to system problems.

Data obtained from evaluating recognition and response systems should be fed back to the healthcare workforce and external stakeholders as required. This may help to inform health professionals of areas that need improvement, and motivate them to change practice and participate in improvement activities. The feedback process also contributes to a culture of transparency and accountability.
IDENTIFY HOW INFORMATION FROM THE CLINICAL GOVERNANCE FRAMEWORK WILL SUPPORT EVALUATION, AUDIT AND FEEDBACK

Committees or individuals with clinical governance responsibilities for recognition and response systems should decide on the:

- components of recognition and response systems that require evaluation and the specific quality measures or evaluation questions to be answered (e.g. how effective are the trigger thresholds in identifying clinical deterioration?)
- method and framework for identifying risks and evaluating performance of these components
- data to collect and the methods for obtaining, analysing and reporting this data.

DECIDE WHICH COMPONENTS OF RECOGNITION AND RESPONSE SYSTEMS REQUIRE EVALUATION

Statewide health services and private hospital groups may choose to establish minimum data collection measures, and specify the roles and responsibilities for collecting and reporting this data. Where this is the case, facilities will need to work within these frameworks when establishing evaluation, audit and feedback systems for recognising and responding to clinical deterioration.

See Table 11 of the implementation guide for the National Consensus Statement (page 296) for details of key components to evaluate for each essential element. Quality measures that facilities can use to evaluate recognition and response systems have been developed by the Commission and are available on the web site.

DECIDE WHICH DATA TO COLLECT, ANALYSE AND FEED BACK

When deciding on measures and processes for data collection, facilities need to consider:

- if the right questions are being asked—will the data collected accurately describe variations in practice and show outcomes?
- whether the data collection method is feasible, efficient and realistic
- if the right information is being fed back to clinicians—is the right data being fed back to encourage change and influence local practices?

INCLUDE REQUIREMENTS FOR EVALUATION, AUDIT AND FEEDBACK PROCESSES IN RECOGNITION AND RESPONSE SYSTEM POLICIES

Evaluation requirements for various components of recognition and response systems should be incorporated into local policies for recognising and responding to clinical deterioration. Information should include:

- what data will be collected and how this will be done
- who will be responsible for collecting the data
- how often the data will be collected
- who will be responsible for analysing the data
- what the reporting requirements are, including frequency of reports, links to the relevant governance committees or individuals, and other feedback processes.
Feedback processes that facilities may like to consider include:

- displaying data on quality boards, in safety bulletins or newsletters
- reporting evaluation results during staff meetings, morbidity and mortality meetings, and other staff forums
- providing feedback to clinicians who were responsible for patients for whom rapid response calls were received
- incorporating evaluation data into education and training programs for recognising and responding to clinical deterioration.

Evaluation systems must have processes in place for collecting and reporting data to the executive and appropriate governance committee; and for providing information to healthcare teams and rapid response providers.

To support this process, facilities need to identify:

- Personnel to undertake evaluation processes—health professionals or other support personnel to undertake audits, review unplanned intensive care unit admissions and deaths, analyse patient complaints, or undertake focus groups or surveys with staff, patients, families and carers.
- Data collection tools—includes audit tools, patient and staff satisfaction surveys, focus group questions, tools to assist with peer review, and analysis of deaths, near misses and critical incidents. Hospital information systems that allow routine extraction of information (such as hospital death rates, unplanned intensive care unit admissions and length of stay) will speed up the data collection process, and may provide information on recognition and response systems to feed back to health professionals.

Depending on the evaluation methods chosen, facilities may need to undertake qualitative and quantitative data analysis for recognition and response systems. This requires personnel trained in analysis techniques such as frequency and trend analysis, as well as thematic analysis associated with qualitative methods. Software to support data analysis and reporting is also required, such as spreadsheets or statistical analysis packages.

Databases and risk management systems are useful tools for managing large volumes of information associated with performance of recognition and response systems. These systems enable data to be stored over time, analysed and displayed.
Health professionals responsible for undertaking collection and analysis of evaluation data need the skills to perform these tasks. Sound methods for collecting data are required to ensure accuracy and reliability of the data, and confidence in any identified need to change health processes.19

Health professionals also need education and training to undertake different types of data analysis and to display data for reporting.

**USE EVALUATION DATA IN EDUCATION AND TRAINING PROGRAMS FOR RECOGNITION AND RESPONSE SYSTEMS**

Evaluation data related to recognition and response systems should be used to identify health professionals’ learning needs and be included in education and training programs that support content delivery and application of these systems.

**EVALUATE THE EFFECTIVENESS OF EVALUATION, AUDIT AND FEEDBACK PROCESSES**

Effective evaluation, audit and feedback systems should support the maintenance and development of high-quality care; compliance with policies and procedures; and improved outcomes for patients who deteriorate clinically.20 It is important for facilities to review systems for evaluating the recognition and response to clinical deterioration to ensure they are working effectively. This is a key responsibility of health service executives or owners and the clinical governance framework. Evaluation of the effectiveness of evaluation, audit and feedback systems should include:

- ensuring data is collected and reported to the correct governance individual or committee
- ensuring data are fed back to the clinical workforce
- reviewing activity, actions and recommendations to ensure deficiencies in data and operation of systems are addressed
- reviewing the success of changes to recognition and response systems. This may include, but is not limited to, reduction in critical incidents, improvements in patient and clinician satisfaction, presence of and adherence to policies and procedures for new systems of care.20
the problem

Delays in recognising and responding to clinical deterioration can occur due to organisational factors such as system design, and human factors such as workload and fatigue.

Technological systems and solutions to combat these issues require robust assessment of safety, efficacy and costs.

goals of this essential element

Technological systems and solutions for recognising and responding to clinical deterioration improve the care process and patient interaction.

Technological systems and solutions for recognising and responding to clinical deterioration demonstrate evidence of safety, efficacy and cost efficiency.

tasks

There is one key task to complete for this essential element.


for this task you will need to:

- identify who has a role in considering technological systems for recognition and response systems, and what that role is
- use the self-assessment and planning tool (on the Commission’s web site) to identify gaps in your technological systems and prioritise your changes
- use the results of your self-assessment to complete an action plan for your ward or facility
- use the five step action framework – Decide, Develop, Resource, Educate, Evaluate – to guide you through implementation.

common terms used in this essential element

Health technology assessment: a multidisciplinary analysis of the “medical, social, ethical, and economic implications of development, diffusion, and use of health technology.”

Telemedicine: the remote delivery of health care using telecommunications infrastructure, for example using audiovisual technology to allow patients or clinicians in remote locations to seek specialist advice or opinions.
why this task is important

New technologies have the potential to improve all aspects of healthcare delivery, including diagnostics, treatment and administration, and can improve the safety and quality of healthcare by reducing the likelihood of errors.25 New technologies can help to design better processes, minimise equipment failures, and remove some of the human or environmental factors that can contribute to adverse events and delays in recognition and response to clinical deterioration.25 For example, multiple studies have shown that computerised decision support can improve health professionals’ performance in interpreting abnormal diagnostic results, medication prescribing and safely managing potential drug interactions.26

Advances in technology associated with different forms of communication, such as electronic medical records, also have the potential to support and improve recognition and response to clinical deterioration. However, not all new technologies are effective—some are costly and do not necessarily improve patient outcomes. Some may also cause harm if not used appropriately or implemented well.20,25 Introducing a new technology may cause new and unforeseen problems that affect workflow, working conditions, communication networks, job security, training needs and other system factors.25 Therefore, the introduction of new technologies to support recognition and response systems needs to support the work of health professionals in providing care to patients, as well as being safe, cost-effective and acceptable to health professionals, patients, families and carers.
DECIDE IF TECHNOLOGICAL SYSTEMS OR SOLUTIONS ARE APPROPRIATE

When considering technological systems and solutions to improve recognition and response systems, facilities should first decide if new systems are needed and appropriate. This involves considering:

- whether there is evidence that existing systems for delivering care are not operating effectively
- whether the introduction of new technology will further improve the operation of recognition and response systems
- whether technological systems and solutions will benefit patients and improve patient outcomes
- whether technological systems and solutions will improve the care process
- if there are any risks (actual and potential) to the safety and quality of patient care; this should involve consideration of patient and staff perceptions of risks
- what are the costs of the new technology, including potential savings and cost-benefit analysis.

DECIDE IF CURRENT OR NEW TECHNOLOGICAL SYSTEMS AND SOLUTIONS CONFORM TO THE RECOMMENDATIONS IN THE CONSENSUS STATEMENT

When deciding if new technologies may be appropriate, facilities should ensure solutions conform to the recommendations for this essential element in the consensus statement.

DEVELOP A BUSINESS CASE, IN ACCORDANCE WITH LOCAL POLICY, FOR THE INTRODUCTION OF NEW HEALTH TECHNOLOGIES AND SOLUTIONS

Once health professionals have decided that a new health technology may be appropriate, a health technology assessment should be undertaken as part of developing a business case seeking approval to introduce the technology. The business case should include consideration of issues such as the improvement of patient safety and clinical outcomes, value for money and the feasibility of the new technology within the organisation.

New technological systems may also be required to meet several national or international standards, such as information security management or electronic communication in health care.

RESOURCE

PROVIDE RESOURCES TO EVALUATE NEW TECHNOLOGICAL SYSTEMS AND SOLUTIONS

Introducing new technology and solutions will require resources such as staff education and training, technological support and maintenance, as well as resources to support evaluation data collection, analysis and reporting.
**RESOURCE**

**ENSURE TECHNOLOGICAL SYSTEMS ARE WELL MAINTAINED AND OPERATIONAL**

It is important that technological systems are well maintained and fully operational. Regular scheduled maintenance of systems will need to occur, and staff should be informed of procedures to use if technological systems become unavailable. These resources should be considered as part of the health technology assessment process, as well as throughout implementation and ongoing operation.

**EDUCATE**

**EDUCATE THE CLINICAL AND NON-CLINICAL WORKFORCE, PATIENTS, FAMILIES AND CARERS ON THE USE OF TECHNOLOGICAL SYSTEMS AND SOLUTIONS**

As part of the introduction of any new system, health professionals will require education on:
- reasons for introducing the new technology or solution
- potential benefits
- use of the new equipment or process
- how to provide comments and suggestions on new technological solutions, including how to report problems
- how to access technological support, if required.

Depending on the type and nature of the technological system being introduced, patients, families and carers may also need education. This education may need to be provided by the clinical workforce and supported by written information.

**EVALUATE**

**EVALUATE AND REPORT ON CURRENT AND NEW TECHNOLOGICAL SYSTEMS AND SOLUTIONS**

New technological systems and solutions should be evaluated and reported on according to local policy and procedures. Piloting technological systems is an important early step. Piloting can demonstrate a “proof of concept” for the organisation and assist with the introduction and diffusion of the technology.

Useful evaluation measures to consider include the:
- impact on patient outcomes or care processes
- alignment of health technology outcomes with financial outcomes
- extent to which uptake of the technology matched the assumptions and evidence provided as part of the health technology assessment
- sustainability of the technology within the facility.

Technological solutions should not place a barrier between the clinician and the patient; instead they should improve the care process and interaction. Therefore, facilities should also ensure that evaluation incorporates staff and patient perspectives of the new technology.

As part of the evaluation process, it is important to monitor issues such as workflow and patient safety incidents to identify whether there are any unexpected consequences of introducing the technology. Monitoring overall process measures (such as calls to the rapid response system) and outcome measures (such as the number of unexpected deaths or cardiac arrests) is also useful when evaluating the impact of the new technology.
what other resources are available to support implementation of this essential element?

Further information, tools and resources can be found in the full implementation guide and on the Commission’s web site:

www.safetyandquality.gov.au

Appendix A of the implementation guide matches the actions discussed in this guide to the National Safety and Quality Health Service Standards, and Appendix B provides examples of quality measures that may assist in guiding evaluation of this essential element in your facility.
ESSENTIAL ELEMENT 5
ORGANISATIONAL SUPPORTS

CLINICAL GOVERNANCE

National Health Service (United Kingdom), Patient involvement and public accountability: a report from the National Health Service future forum

Queensland Health, clinical governance resources

Victorian Healthcare Association, clinical governance resources

Victorian Quality Council, clinical governance guides, resources and tools

TOOLS

Governance and project implementation checklist
www.safetyandquality.gov.au

ESSENTIAL ELEMENT 6
EDUCATION

EDUCATION PROGRAMS

Australian Capital Territory Health, Compass Register (free) then log in so that you can access information about the Compass education program

New South Wales Between the Flags, DETECT
http://nswhealth.moodle.com.au/DOH(DETECT/content/

ESSENTIAL ELEMENT 7
EVALUATION, AUDIT AND FEEDBACK

GENERAL INFORMATION

Australian National Audit Office
www.anao.gov.au

Australian Institute of Health and Welfare, national health statistics and information
www.aihw.gov.au

Healthcare Quality Improvement Partnership

RAPID RESPONSE SYSTEM DATA COLLECTION
(SEE ALSO APPENDIX B OF THE FULL IMPLEMENTATION GUIDE)


International Liaison Committee on Resuscitation, Consensus Statement on Core Rapid Response System Data Collection
http://circ.ahajournals.org/content/116/21/2481.full

ESSENTIAL ELEMENT 8
TECHNOLOGICAL SYSTEMS AND SOLUTIONS

Australian Government Department of Health and Ageing, health technology assessment web page

National E-health Transition Authority, electronic health records (Australia)
www.nehta.gov.au

REFERENCES AND RESOURCES

Queensland Health e-learning, EPIQ

www.safetyandquality.gov.au

Rapid Response System Data Collection
(SEE ALSO APPENDIX B OF THE FULL IMPLEMENTATION GUIDE)


International Liaison Committee on Resuscitation, Consensus Statement on Core Rapid Response System Data Collection
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ESSENTIAL ELEMENT 8
TECHNOLOGICAL SYSTEMS AND SOLUTIONS

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REFERENCES AND RESOURCES
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