A safe system framework for recognising and responding to children at risk of deterioration

July 2016
Background

Research shows that failure to recognise and treat patients whose condition is deteriorating is a cause of significant unintended harm in healthcare environments. There are multi-factorial reasons why deterioration in children is missed but they can be clustered into themes:

- systems failure
- not responding to physiological changes (recognising and responding to deterioration)
- parent and carer engagement (and working in partnership with patients and their families)
- healthcare professionals training and education.

These themes were used to create and collate resources for a project led by NHS England in 2015. The ReACT (Respond to Ailing Children Tool) aimed at improving outcomes and reducing the incidence of deterioration in the acutely ill infant, child or young person.
Background

Evidence from the patient safety incidents received into the National Reporting and Learning System (NRLS) suggests that the greatest potential for improvement lies within the whole system of recognition and response to deterioration, not the measurement of a child’s observations in themselves, ie an early warning system rather than score.

There have been recent moves towards the development and spread of a single Paediatric Early Warning System (PEWS) in Scotland, Northern Ireland and the Republic of Ireland. These programmes should be looked at closely for shared learning and consideration of what might be possible in our much larger healthcare system in England.

A National Institute for Health Research (NIHR) study known as 'PEWS Utilisation and Mortality Avoidance (PUMA)' is also ongoing. This study is examining the features of both scores and systems, and other factors which may be implemented to improve the outcomes of harm, morbidity and mortality in children who deteriorate while they are inpatients.
Introduction to the safe system – balancing the system

Everyone seems to know what ‘good looks like’ intuitively, if not explicitly, for the system as a whole. This framework attempts to show what collectively could make a difference for the recognition and response to children at risk of deterioration.

Clinicians and experts helped create this ‘state of the nation view’. It has been created to support organisations and local services in safe system thinking, to improve clinical team working and partnerships with families children and young people. There is also further specific action for national organisations and regional networks to ensure a focus on safe systems for children and young people.

Core elements

The safe system framework encompasses a number of core elements, each a particular aspect of the system. It is wrapped around the patient and so all the elements focus on:

- the infant, child or young person
- the family or carers
- the clinical team
- the wider team, such as pathologists, pharmacists, radiologists, etc
- the service or organisation
- national organisations with leadership roles, such as NHS Improvement, NHS England, the Royal College of Paediatrics and Child Health, the Royal College of Nursing and others
The core elements are:

- **Patient safety culture** – a large and challenging element covering many of the aspects all groups are now trying to define and develop including a commitment to overall improvement in patient safety, prioritising safety, leadership and executive accountability, and monitoring and measuring patient safety.

- **Partnership with patients and their family** – while all the core elements focus on the patient and family, this partnership is an area of increased growth and central to supporting all the others.

- **Recognising deterioration** – the ability to spot physiological deviations before significant changes in care are required or harm occurs is a fundamental working element that is central to the system.
  - **Responding to deterioration** – ensuring a timely and accurate response encompassing all necessary support and treatment from all those involved in the care of the patient is the vital element that is often the key change required.

- **Open and consistent learning** – consideration of the system errors and individual responsibility, recording, investigating and evaluating incidents as well as best practice in order to learn and effect change will drive forward continual improvements in all elements.

- **Education and training** – consistently building clinical knowledge and capability as well as patient safety and improvement methods will provide the foundation for all elements to be enhanced.
**Instructions**

To help you navigate your way around the framework there are clickable buttons that take you back or forward to set places.

On the home page (the next page) click on the segments within the image to navigate to information relevant to that section.

To return to the home page click on the image in the bottom left corner of each page.

The framework is best viewed in Adobe Acrobat Full Screen Mode:

Choose View > Full Screen Mode.

Do any of the following: To go to the next page, press the Enter, Page Down, or Right Arrow key.

To close Full Screen mode, press Ctrl+L or Esc. (Escape Key Exits must be selected in the Full Screen preferences).
Patient safety culture

The statements here are the responsibilities or needs for each group. They may be used to assess and plan improvements for each component in the system.

- **Patient, parent and family engagement in delivering improvement activities**
- **Patient and parent experience/feedback surveys and actions for improvement**
- **Open and supported disclosure following patient safety incidents**
- **Patient safety leadership and responsibilities at all levels**
- **Open and robust communication model, such as routine safety briefings; structured communication for escalation; open disclosure and comprehensive investigations for patient safety incidents**
- **Identifying positive case scenarios and ‘learning from excellence’**
- **Broad leadership for patient safety, such as strategic priorities and goals and executive accountability**
- **Deliver improvement in patient safety, such as monitoring progress and driving the execution of plans; establishing and monitoring explicit system level measures; and building patient safety and improvement knowledge and capability**
- **Safe staffing levels, skill mix and resources**

Leadership for patient safety, such as the provision and clarity of data and evidence for change, recommendations and support for improvement
Partnership with patients and family

The statements here are the responsibilities or needs for each group. They may be used to assess and plan improvements for each component in the system.

**Children, family or carers**
- Involvement in individualised care decisions
- Family-led/patient-led care activities, such as regular family-centred/parent-focused times (rounding); key periods for family to remain with the patient
- Identifying the uniqueness of young people’s needs, contribution and concerns

**Clinicians and wider team**
- Involvement of patients and families in individualised care decisions
- Family-led/patient-led care activities, such as regular family-centred/parent-focused rounds; identify key periods for family to remain with the patient
- Actively supporting the uniqueness of young people’s needs, contribution and concerns
- Appropriate transfer and discharge communications including specific safety net advice and clarity on deterioration signs, symptoms and actions to take

**Service or organisation**
- Patient, parent and family focused information and resources
- Patient, parent and family engagement in delivering improvement activities
- Patient and parent experience/feedback surveys and actions for improvement
- Open and supported disclosure following patient safety incidents

**Regional, national, networks**
- Support and resources to highlight and share good examples of patient and family partnership working for safe care
Recognising deterioration

The statements here are the responsibilities or needs for each group. They may be used to assess and plan improvements for each component in the system.

- **Involvement in individualised care decisions**
- **Opportunities to contribute to the recognition of the deteriorating child** such as: safety netting; being taught what matters with regard to the patient’s condition and empowering families to express concerns (for example-family members being able to activate a system of escalation to senior staff as part of PEW charts)

- **PEW charts/track and trigger tool** including clarity on the frequency of observations, triggers for escalation (chart trigger/staff concerns) and clear protocols for graded response
- **Structured communication for escalation**, such as Situation, Background, Assessment and Recommendation tool (SBAR)
- **Systems and processes regarding the assessment and monitoring of patients** such as clinical handover, safety briefings, multi-disciplinary rounds and ward rounds
- **Knowledge and practice of the use of situational awareness to improve safety**
- **Good clinical pathways for the identification of clinical conditions requiring urgent care** such as sepsis

- **Leadership at all levels** to support the responsibilities of the clinicians and wider team in recognising the deteriorating child, including evidence/examples of good practice and actions for improvement
- **Knowledge of the use of situational awareness to improve safety in the senior leadership team**

- **System-wide knowledge and thinking on the gaps, research and debate in this area including support for the publication and recommendations for action when evidence becomes available**

**Clinicians and wider team**

- **Children, family or carers**

**Service or organisation**
Responding to deterioration

The statements here are the responsibilities or needs for each group. They may be used to assess and plan improvements for each component in the system.

- **Children, family or carers**
  - Involvement in individualised care decisions
  - Communication protocols, standards or principles with patients and families

- **Clinicians and wider team**
  - Structured communication model for escalation, such as SBAR, and local response protocols (such as review, rapid response teams, medical emergency teams and transfer)
  - Awareness of negative attitudes towards escalation that may be downgraded on review
  - Clear plans for treatment/clinical monitoring and review
  - Knowledge and use of situational awareness
  - Good clinical pathways for condition-specific responses such as mental health needs and children with complex medical needs
  - Discharge/transfer protocols including clear safety net advice

- **Service or organisation**
  - Availability of working equipment for taking physical observations
  - Leadership at all levels to support the responsibilities of the clinicians and wider team in recognising the deteriorating child, including evidence of good practice and actions for improvement

- **Regional, national, networks**
  - System-wide knowledge and thinking on the gaps, research and debate in this area including support for the publication and recommendations for action when evidence becomes available
Open and consistent learning

The statements here are the responsibilities or needs for each group. They may be used to assess and plan improvements for each component in the system.

**Children, family or carers**
- Open and supported disclosure following patient safety incidents
- Feedback to patients and families on learning from incidents and surveys
- Appropriate skills and updates on taking and recording physiological observations accurately
- Support for patients, families and staff involved or witnessing a patient safety incident, including the use of de-briefing and follow up
- Carrying out thorough, timely investigations with actions for learning
- Regular activities to measure, monitor and report on the processes and outcomes around spotting and treating deterioration
- Knowledge of improvement methods

**Clinicians and wider team**
- Support for patients, families and staff involved or witnessing a patient safety incident, including the use of de-briefing and follow up
- Carrying out thorough, timely investigations with actions for learning
- Regular activities to measure, monitor and report on the processes and outcomes around spotting and treating deterioration
- Knowledge of improvement methods

**Service or organisation**
- Support for patients, families and staff involved or witnessing a patient safety incident
- Enabling and supporting investigations; ensuring data and information are triangulated and collective learning is endorsed across patient safety issues
- Commitment to continuous improvement
- Identifying positive case scenarios and learning from success
- Awareness of medication errors including knowledge of patient safety incidents, investigations and formation of improvement plans
- Guidance and resources to support good quality investigations
- National learning on patient safety incidents and issues related to deterioration in infants, children and young people, such as the National Reporting and Learning System, Child Death Overview Panels and Retrospective Case Note Reviews
Education and training

The statements here are the responsibilities or needs for each group. They may be used to assess and plan improvements for each component in the system.

- Children, family or carers:
  - Encouragement and awareness of the challenges of families to speak up
  - Involvement of patients and families in training and education, such as development of content, vignettes, videos or interactive sessions

- Clinicians and wider team:
  - Personal and team plans for development and learning on the components of the safe system, including induction requirements for new staff
  - Training and learning as a team (immediate and cross-boundary team)
  - Clear clinical handover protocol and expectations (such as handover bundle, online training, e-handover system, assessment-based structure)

- Service or organisation:
  - Knowledge of training needs and opportunities for staff in the recognition and response to children at risk of deterioration
  - A range of training and education methods such as simulation and multi-disciplinary learning opportunities

- Regional, national, networks:
  - System-wide awareness of gaps and collaborative working to address issues