Improving Recognition & Response to Clinical Deterioration
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Context
Eastern Health is a large multisite public health service in metropolitan Melbourne which provides a range of emergency, medical and general healthcare services.

Background
Signs of clinical deterioration often precede cardiac arrest, unplanned admission to the intensive care unit and unexpected death.1 Early intervention in response to signs of deterioration has been shown to reduce morbidity and mortality.2

Problems
Recognition and response to clinical deterioration needed to improve in our health service to reduce preventable morbidity and mortality. An assessment of the problem and analysis of its causes revealed:
- Poor measurement & recording of vital signs
- Different observation charts & documentation
- Different rapid response systems across sites
- Variable resuscitation resources across sites
- Variable data collection, analysis & reporting
- Systems not designed to detect early clinical deterioration
- Non-centralised governance

Objectives
To develop and implement a clinical deterioration framework to improve detection, recognition and response to deteriorating patients across the organisation.

Strategies for Change
This transformational change across a large multisite organisation required every clinician to translate knowledge of new clinical practices into action.

Staff at all levels were engaged to identify threats and opportunities to improve recognition and response to clinical deterioration.

In order to prepare for implementation of the framework, education sessions were conducted across sites and a communication strategy developed which included posters, lanyard cards for staff, workshops and presentations.

Interventions:
To establish the framework:
- Performance excellence improvement and innovation model adopted
- Enterprise-wide governance established with expert advice - Clinical Deterioration Expert Advisory Committee
- Comprehensive risk analysis using bowtie analysis
- Lean systems approach to reduce unacceptable variation

To improve recognition:
- Observation charts were developed and implemented to enable early detection of clinical deterioration and to guide escalation
- Standardised documentation of treatment limitations including rapid response criteria modifications introduced

To improve response:
- Standardisation of resuscitation equipment and processes.

To improve monitoring:
- Standardisation of rapid response data management and reporting systems.

Results:
Performance monitoring & evaluation of the framework is achieved by:
- Rapid response system data analysis
- Auditing of observation charts
- Staff and consumer surveys
- Risk assessment including root cause analysis

Since the framework was introduced there is:
- Improved vital sign measurement & recording
- Improved detection & recognition of clinical deterioration
- Increased activation of rapid response
- Decreased hospital mortality rates
- Positive staff feedback.

Conclusion:
The Clinical Deterioration Expert Advisory Committee has established a framework which is improving recognition and response to clinical deterioration across Eastern Health. The committee provides governance, clinical leadership and expert advice and takes a risk-based approach with monitoring and review of effectiveness of controls and overall assurance that the risk to patients is being effectively and efficiently managed.

Lessons Learnt
The key to the success of this redesign initiative has been and continues to be staff engagement together with a shared vision to improve quality and safety for our patients at Eastern Health.

References:

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