



Patient deterioration and recognition and response systems: A factsheet for senior clinicians



The Health Quality & Safety Commission (the Commission) has identified significant opportunities to improve the quality and safety of systems for recognising and responding to signs of deterioration among adult patients in New Zealand hospitals.

We need your support to implement the nationally standardised adult vital signs chart, New Zealand early warning score and a localised escalation and response system.

This factsheet describes the recognition and response system. Please go to the Commission's website for more information about this and other work we have planned. www.hqsc.govt.nz/our-programmes/patient-deterioration.

Background

Factors that contribute to failures to recognise or respond to patient deterioration are complex and wide-ranging. They include:

- a lack of formalised systems and processes
- inadequate clinical governance
- a siloed and super-specialised hospital workforce
- problems associated with inadequate clinical knowledge and skills
- suboptimal handover, communication and teamwork
- inconsistent patient, family and whānau engagement
- organisational resource constraints
- competing priorities.(1-4)



What makes an effective recognition and response system?



There is broad agreement about the components necessary for effective recognition and response systems and these have been mandated as policy in some jurisdictions.(5-7)

Systems for recognising patient deterioration rely on the use of tools such as paper or electronic vital sign charts with embedded triggers for escalating care based on abnormal measurements. The New Zealand early warning score is based on the United Kingdom national early warning score, which is currently the most well-validated tool available.(8)

Escalation and response systems provide a mandatory pathway for getting help from progressively more senior and more skilled responders as a patient's deterioration worsens. These systems enable early intervention, prevent adverse outcomes such as cardiac arrest, and foster a clinical culture of routinely calling for help when needed.(6, 9, 10)

How can you support successful implementation and improvement?



Recognition and response systems require a whole-of-hospital approach because they operate across specialty boundaries and at all times of day and days of the week. They can highlight longstanding clinical issues that need to be addressed (for example, clinical training for junior clinicians or communication and clinical documentation practices). Visible, collaborative and ongoing executive, clinical, and operational leadership are needed if recognition and response systems are to be resourced adequately and supported, and to function successfully.

Effective recognition and response processes are dependent on underpinning structures for clinical governance. Clinical leaders with accountability for governance of the system will need to consider issues such as resourcing and sustainability, clinical communication, education and training, measurement and evaluation, and quality improvement. You can assist by:

- sharing your expertise on clinical governance groups and in clinical training programmes
- developing processes for data collection and analysis
- leading or participating in projects to develop improvements to address clinical issues that may be highlighted by recognition and response systems.

Effective implementation that will lead to improved patient outcomes relies on achieving a culture of care where it is routine for junior clinicians to seek, and receive, timely advice from appropriately skilled responders. By providing visible and ongoing leadership you will promote use of the system and support junior colleagues to escalate care and respond to calls to assess patients who are deteriorating. Senior clinicians who respond constructively to requests for assistance – and actively support and promote use of recognition and response processes – contribute to developing a positive culture where teamwork and escalation of concerns about acutely unwell patients are rewarded. Conversely, if senior clinicians block or subvert recognition and response processes, this can deter junior colleagues from calling for help.

How will the Commission support this work?

The Commission is providing a package of tools, guidance and support to help project teams implement and improve recognition and response systems. These include:

- a standardised vital sign chart and New Zealand early warning score
- implementation support
- guidance on developing appropriate localised escalation pathways
- advice about necessary structures for ongoing clinical governance of the system.

Assistance includes providing expert clinical advice, building quality improvement capability in organisations and developing appropriate measures and evaluation strategies.

References

1. Cioffi J, Salter C, Wilkes L, et al. 2006. Clinicians' responses to abnormal vital signs in an emergency department. *Australian Critical Care* 19(2): 66-72.
2. Endacott R, Kidd T, Chaboyer W, et al. 2007. Recognition and communication of patient deterioration in a regional hospital: A multi-methods study. *Australian Critical Care* 20: 100-15.
3. Van Leuvan C, Mitchell I. 2008. Missed opportunities? An observational study of vital sign measurements. *Critical Care and Resuscitation* 10(2): 111-5.
4. DeVita M, Hillman K, Bellomo R (eds). 2010. *Textbook of Rapid Response Systems: Concept and Implementation*. New York: Springer.
5. Australian Commission on Safety and Quality in Health Care. 2012. National Safety and Quality Health Service Standards (September 2012). Sydney: ACSQHC.
6. Ludikhuizen J, Brunsveld-Reinders A, Dijkgraaf M, et al. 2015. Outcomes Associated With the Nationwide Introduction of Rapid Response Systems in The Netherlands. *Critical Care Medicine* 43: 2544-51.
7. Royal College of Physicians. 2012. *National Early Warning Score (NEWS). Standardising the assessment of acute-illness severity in the NHS*. London: RACP.
8. Prytherch DR, Smith GB, Schmidt PE, et al. 2010. ViEWS—Towards a national early warning score for detecting adult inpatient deterioration. *Resuscitation* 81: 932-7.
9. Pain C, Green M, Duff C, et al. 2017. Between the flags: implementing a safety-net system at scale to recognise and manage deteriorating patients in the New South Wales Public Health System. *International Journal for Quality in Health Care* (29)1: 130-6.
10. Stevens J, Johansson A, Lennes I, et al. 2014. Long-term culture change related to rapid response system implementation. *Medical Education* 48: 1211-19.



