

Rapid Detection and Response (RDR) observation charts

The National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration¹ was released in 2010 by the Australian Commission on Safety and Quality in Health Care (ACSQHC). The Consensus Statement informed the development of 'Recognising and Responding to Clinical Deterioration in Acute Health Care Services Standard 9', one of the 10 National Safety and Quality Health Services Standards (NSQHS) that Australian health care organisations are being accredited on from January 2013.

To meet the requirements of Standard 9 and improve outcomes for patients in South Australia, the Department for Health and Ageing, Safety and Quality Unit in collaboration and consultation with broad representation state-wide, has developed a suite of Rapid Detection and Response (RDR) observation charts that will replace current observation charts across South Australia.

SA Health RDR observation charts

Measurement and documentation of physiological observations is one essential element of a broader system for recognising and responding to clinical deterioration. Track and trigger observation charts, or the electronic equivalent, are essential tools for documenting, monitoring and communicating changes in physiological observations. Correct use of these charts can have a significant impact on users' ability to recognise deterioration and initiate appropriate interventions. The SA Health RDR observation charts provide a tiered response to physiological deterioration within patient populations and the option of modifying specific patient parameters to appropriately reflect an individual patient's condition.

Benefits of RDR observation charts

Commonly there is evidence that a patient is deteriorating well before a serious adverse event occurs, such as a cardiac arrest, admission to Intensive Care or an unexpected death². This suggests that if clinical deterioration is identified and managed in a timely manner, then patient outcomes could be improved.

Paper-based observation charts have traditionally been the principal means of recording and monitoring changes to patients' vital signs, and in some healthcare sites will continue to do so. For other sites an electronic patient record system will be used, in which the RDR patient parameters and escalation responses have been embedded.

This system, in either form, has been developed to empower clinicians to take action when patients are deteriorating and should be regarded as a tool to aid decision-making rather than something to undermine clinical judgment.

Physiological parameters

Standard observations included on RDR charts are:

- > Respiratory rate
- > Blood pressure
- > Pain score at rest
- > Oxygen saturations
- > Pulse rate
- > Level of consciousness/sedation
- > Oxygen flow rate and delivery method
- > Temperature

Specific patient populations of paediatric and maternity, have more specific parameters included. Neurological, neurovascular, fluid balance and other observational charts are not incorporated into the RDR observation charts.

Graphing observations

Observations must be graphed with dots in the centre of each row, with dots at adjacent time points linked by straight lines. This may involve a significant practice change for both nurses and doctors.

The rationale for presenting observations in this way is that graphing observations improves the detection of clinically significant trends³. There is also evidence that suggests when numerical values are used instead of dots or blood pressure arrows there is a correlation with increased error rates and extended decision times, which has been attributed to visual clutter⁴. In view of this the ACSQHC support the use of dots and blood pressure arrows, and considers the practice change required necessary to patient safety⁵.

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Escalation of care

Escalation Flow Charts will be available at the point of care for every patient and will reflect local policy at each healthcare site. You are required to follow the instructions on these flow-charts whenever a patient's observations fall within a coloured zone, unless a modification has been clearly documented and is current.

Yellow zone

If a patient's observations enter the Yellow Zone, a Registered Nurse must review the patient and frequency of observations must be increased. Three or more observations in the Yellow Zone require escalation to the next level.

Red zone

If a patient's observations enter the Red Zone, a Multi-Disciplinary Team Review is required, comprising of at least a Medical Officer and a Registered Nurse and the frequency of observations must be increased. Three or more observations in the Red Zone require escalation to the next level.

Purple zone

If a patient's observations enter the Purple Zone a Medical Emergency Response is required, where clinical staff with advanced life support skills will be called to resuscitate the patient. In this instance the senior doctor responsible for the patient must be notified of the event. If the patient remains on the ward, the frequency of observations must increase until they return to their usual parameters, or unless a modification or end-of-life plan has been initiated.

Human factor design: I've heard of it, what does it mean?

Human factor science incorporates knowledge from a range of disciplines including psychology, engineering and graphic design. Essentially human factor expertise helps to minimise the risk of human error that is commonly associated with chart design, such as clutter and column shift. The SA Health RDR observation charts comply with the human factor principles, reducing the likelihood of human error when documenting observations.

Implementing the RDR observation chart is only one part of a robust recognition and response system

The National Consensus Statement¹ specifies eight essential elements to ensure effective recognition and response systems. The measurement and documentation of vital signs is only one aspect of this initiative. Much more is required to ensure early recognition and timely response to the deteriorating patient.

References

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5. The Australian Commission on Safety and Quality in Health Care (ACSQHC), EE1 ORC3 Fact Sheet. Potential practice changes associated with implementing an observation and response chart. 2011. ACSQHC. Sydney. www.safetyandquality.gov.au/wp-content/uploads/2012/08/ee1-orc-3-fact-sheet.pdf

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