

NSQHS Standard 9 Clinical Deterioration

Definitions sheet



Recognising and Responding to Clinical Deterioration in Acute Health Care Audit Tools Definitions

The following definitions and examples apply to the Clinical Deterioration Audit Tools:

1. Observation Chart
 - a. Single parameter tool (track and trigger)
 - b. Aggregate scoring system
 - c. Combination system eg. Q-ADDS
 - d. Non track and trigger

1. Observation Chart

Ensuring that patients who deteriorate receive appropriate and timely care is a key safety and quality challenge. All patients should receive comprehensive care regardless of their location in the hospital or the time of day. Even though a range of systems have been introduced to better manage clinical deterioration, this area needs to remain a high priority while patients continue to experience preventable adverse events because their deterioration is not identified or properly managed.

The **objective of an observation chart is to present the most important vital signs for detecting deterioration** in most patients in a user-friendly manner. One of its specific aims is to detect deterioration rather than being a general observation chart.

One of the factors that can contribute both to poor recording of observations and failure to interpret them correctly is the way in which observation charts are designed and used. The use of human factors principles in their design supports accurate and timely recognition of clinical deterioration, and prompts action when deterioration is observed.

Many types of general observation charts exist in Queensland Health. Examples of the various types of tools are shown here to assist you in determining which tool your facility/ward uses.

a) **Single parameter tool (track and trigger)** - Vital signs are compared with a simple set of criteria with predefined thresholds, with a **response** algorithm being **activated when any criterion is met**. The main vital signs are graphed so that trends can be easily 'tracked'. There are also colour coded zones to indicate when patient observations are likely to represent deterioration, where a response is 'triggered'. Incorporating call criteria in observation charts is an effective way in which to highlight possible deterioration and assist clinicians with making decisions as to when to 'trigger' a response, whether that be for a clinical review or rapid response call.

Example - MECC (Medical Emergency Call Criteria)

MECC (Medical Emergency Call Criteria) Chart Structure:

- Page 1 (Observation Grid):**
 - Columns:** Date, Time, Respiration Rate, SpO2, O2 Therapy (L/Min), Blood Pressure (mmHg), Heart Rate (beats/min), Temperature (°C), GCS (Eye, Verbal, Motor), Pain (Location, Size), Limb Power (Arm, Leg).
 - Color Coding:** The grid is color-coded to indicate risk levels: Green (Normal), Yellow (Warning), Orange (Action), and Red (Emergency).
- Page 2 (Criteria and Actions):**
 - Patient Information:** Name, Address, Date of Birth, etc.
 - Are there any modifications to the MECC?** (Yes/No)
 - ACTIONS:**
 - Notify Shift Coordinator and repeat observations in 15 minutes.
 - As 15 minutes, if observations remain in the yellow area, Contact the patient's Treating / Clinical Team immediately for review plan and management plan.
 - If no response from step 2 within 15 minutes, or patient deteriorates, ring 333 and state Medical Emergency, Location and the patient's Treating Medical / Clinical Team.
 - Record "MP" in the INTERVENTION box and document actions on the "Interventions / Comments" page.
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 - MEDICAL EMERGENCY CALL CRITERIA (MECC):**
 - AIRWAY:**
 - Thickened sputum
 - Respiratory Rate:
 - < 8 or > 27 breaths/min
 - New drop in SpO2 < 90%
 - BREATHING:**
 - Respiratory Rate:
 - < 8 or > 27 breaths/min
 - New drop in SpO2 < 90%
 - CIRCULATION:**
 - Heart Rate:
 - < 40 or > 120 bpm
 - New change in Systolic BP > 30 mmHg
 - NEUROLOGY:**
 - Decrease of level of consciousness (GCS < 8)
 - Unilateral weakness
 - Unilateral abnormal reflexes
 - Any other response
 - OTHER:**
 - Any patient who has difficulty
 - Unexplained drop in SpO2
 - Unexplained drop in GCS
 - Unexplained drop in BP
 - Unexplained drop in HR
 - Unexplained drop in RR
 - Unexplained drop in SpO2
 - Unexplained drop in Temp
 - Unexplained drop in Pain Score

b) Aggregate scoring system - Core observations attract a weighted Score. **“Weighted scores** are assigned to physiological values and **compared with predefined trigger thresholds**. The main vital signs are collected and points are allocated. The points for each observation are added to give a score that helps identify patients with subtle signs of deterioration. A supporting Action Plan triggers certain actions when certain scores are reached.

c) Combination system - **Single or multiple parameter systems** used in combination with **aggregate weighted scoring** systems.

QADDS – Adult Deterioration Detection System

Score Legend

- Score 0
- Score 1
- Score 2
- Score 3
- Emergency Call

Actions Required for Tertiary and Secondary Facilities

Total Q-ADDS Score 1-3

- Carry out and document appropriate interventions as prescribed
- Consider increasing frequency of observations (minimum 4th hourly)
- Manage fever, pain or distress
- Review oxygen requirement
- Consider notifying team leader

Total Q-ADDS Score 4-5

- Notify team leader
- Request ward doctor to review patient within 30 minutes
- Carry out and document appropriate interventions as prescribed
- Hourly observations (or more frequently if indicated)
- Obtain a Total Q-ADDS Score after interventions
- If no review within 30 minutes, escalate to registrar review
- If patient must leave ward area, nurse must accompany patient

Total Q-ADDS Score 6-7

- Notify team leader
- Request registrar to review patient within 30 minutes, ward doctor to attend
- Carry out and document appropriate interventions as prescribed
- Registrar to ensure consultant is notified
- Half hourly observations (or more frequently if indicated)
- Obtain a Total Q-ADDS Score after interventions
- If no review within 30 minutes, or if concerned, initiate emergency call
- If patient must leave ward area, doctor and nurse must accompany patient

Total Q-ADDS Score ≥ 8

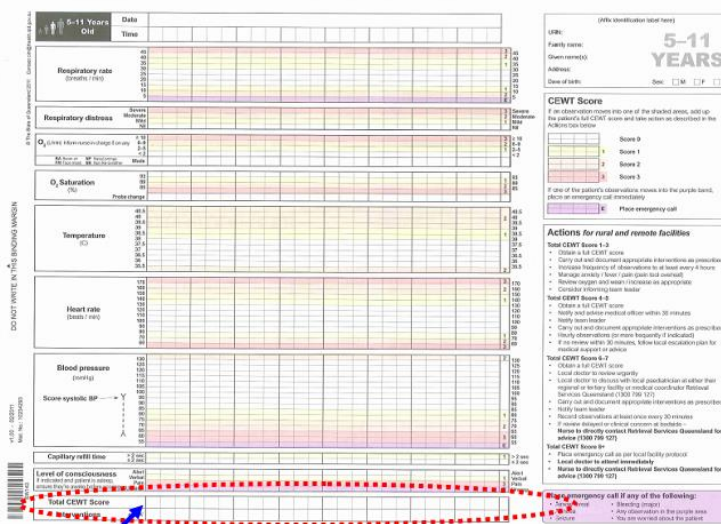
- Initiate emergency call
- Registrar to ensure consultant is notified
- If patient must leave ward area, registrar and nurse must accompany patient

Emergency call if:

- Any observation is in a purple area
- Any break
- Respiratory or cardiac arrest
- New drop in O₂ saturation < 90%
- O₂ saturation < 85% without response to O₂
- Sudden fall in level of consciousness
- Seizure
- You are concerned about the patient but they do not fit the above criteria

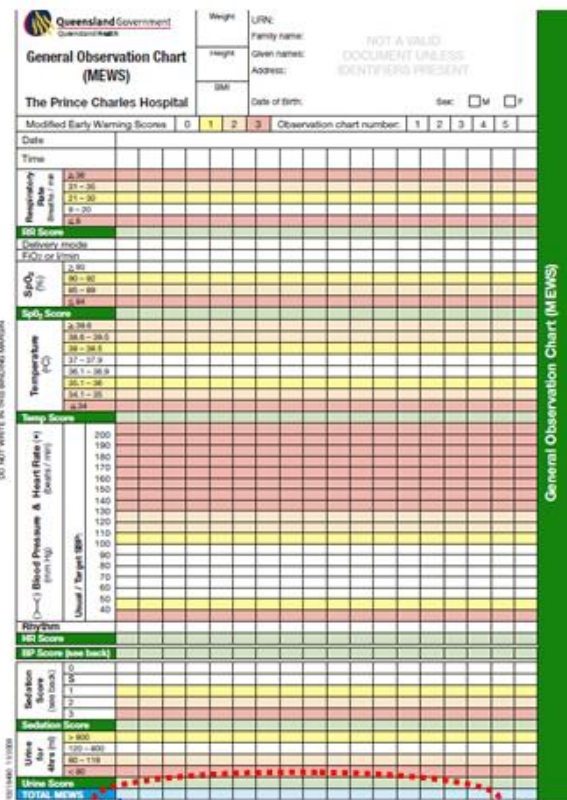
Scores for all physiological parameters are summed up to obtain a total score

CEWT – Children’s Early Warning Tool



Scores for all physiological parameters are summed up to obtain a total score

Example - MEWS General Observation Chart



Scores for all physiological parameters are summed up to obtain a total score

- d) Non track and trigger - Other observations charts may include the collection of vital signs with **no scoring or no criteria for a response**

Acute Observation Chart

THIS OBSERVATION CHART IS TO BE USED FOR PATIENTS: (1) on frequent PRN or regular opioids including IM/SC/PO; (2) needing frequent/acute observations.

Queensland Government PRINCESS ALEXANDRA HOSPITAL ACUTE OBSERVATION CHART WARD _____		PAIN SCORE R - Rest M - Movement 0 _____ 10 No Pain Worst Pain	SEDATION SCORE 0 - Awake, alert 1 - Mild, easy to rouse 1S - Asleep, easy to rouse 2 - Moderate, unable to stay awake 3 - Difficult to rouse <small>(wake to assess level of consciousness if respiratory rate \leq 10/min or irregular, or does not rouse to touch or voice.)</small>	PONV SCORE 0 - Nil 1 - Mild 2 - Moderate 3 - Severe <small>(last hour)</small>	PATIENT IDENTIFICATION LABEL NAME: _____ UR: _____ SEX: M / F D.O.B.: ____/____/____ <small>Affix patient identification label here</small>														
		FUNCTIONAL ACTIVITY SCORE (FAS) A - activity unlimited by pain B - activity mild to moderately limited by pain C - activity severely limited by pain	BROMAGE SCORE 0 - Full flexion 1 - Just able to move knees 2 - Able to move feet only 3 - Unable to move feet or knees																
ANALGESIC THERAPY											COMMENTS <small>eg intervention for abnormal observation (Sedation > 1, Pain Score > 5, Bromage > 0)</small>	SIGN INIT.							
DATE	TIME	B.P.	TEMP.	PULSE	O ₂ FLOW RATE	O ₂ SAT	RESP.	Sedation	Analgesic given (SC)	PAIN R M			FAS	PONV	BROMAGE	PROFAL rate ml/hr	N/SC release mg/kg/hr	CUMULATIVE P.C.A. DOSE mg/kg	

ACUTE OBSERVATION CHART

Reference <http://www.nice.org.uk/nicemedia/pdf/CG50FullGuidance.pdf> page 24 accessed 19 July 2012

Further information can be found at:

- Australian Commission on Safety and Quality in Health Care Website: <http://www.safetyandquality.gov.au/our-work/recognising-and-responding-to-clinical-deterioration/>
- Queensland Health staff can access information on Recognition and Management of the Deteriorating Patient via the Queensland Health intranet Patient Safety website.

We recognise and appreciate that there may be gaps in the scope and questions included in these tools, however, as this is a '**Work in Progress**', future versions will build upon the existing scope and questions, and incorporate staff feedback and suggestions for improvement.

The Patient Safety and Quality Improvement Service, Clinical Excellence Division, welcomes feedback on the audit tools and the measurement plans, to ensure the tools meet the needs of Hospital and Health Services. We appreciate any feedback you can provide for the next version.

Please email Patient Safety and Quality Improvement Service on PSQIS_Comms@health.qld.gov.au for feedback or comments.

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