NCCU CLINICAL GUIDELINES
SECTION: 1

RESUSCITATION AND ADMISSION TO NICU

Section 1: Resuscitation and admission to NICU
Recognising and responding to clinical deterioration
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Neonatology Clinical Guidelines
King Edward Memorial/Princess Margaret Hospitals
Perth Western Australia
Authorisation and review by
Neonatal Coordinating Group

RECOGNISING AND RESPONDING TO CLINICAL DETERIORATION

AIM

To enhance outcomes of neonatal patients through improved recognition of abnormal vital signs and potential clinical deterioration, and to establish a response plan when observations fall consistently outside the normal range enabling appropriate interventions. See Monitoring Guidelines (Resuscitation and Admission Section 1)

BACKGROUND

Research indicates that signs of clinical and physiological instability often precede a cardio-respiratory arrest. In many cases these events may be prevented if the cause of deterioration is recognised early and acted upon before the patient deteriorates beyond the point of reversibility.
In early stages of deterioration there are often important clinical changes in respiratory rate, oxygen saturation, blood pressure, heart rate, temperature and conscious/mental status which may go unrecognised. A 'track and trigger' system that 'tracks' the measurement of vital signs and 'triggers' a predetermined response of intervention/review has been shown to help trap and/or avoid deterioration early and help mitigate deterioration by initiating an early response.

EXCLUSIONS

Infants who are ventilated, or on CPAP, or receiving HHF as they are already having hourly observations documented on Neonatal Observation Chart and Nursing Assessment – ICU (MR 489) and would trigger frequently.

RECORDING VITAL SIGNS AND RECOGNISING DETERIORATION

Observations must be done on all neonatal patients as per the below monitoring guideline, and recorded on the Neonatal Observation Chart and Nursing Assessment – Nursery (MR 491).
The six core physiological (and the minimum) vital signs to be recorded are respiratory rate, oxygen saturations, blood pressure, heart rate, temperature, and level of consciousness. See Monitoring Guidelines (Resuscitation and Admission Section 1). Urine output and pain should also be assessed regularly. Blood glucose level and urinalysis may also be indicated as per the infant's condition.

HOW TO RECOGNISE A DETERIORATING NEONATE AND RESPOND

Use the guidelines/tables below to identify clinical deterioration and obtain the appropriate action or review. If you or the infant's family have clinical concern, do not hesitate to raise the concerns with the rest of the team.

Code Blue Paediatric Emergency Call

Response Criteria	Actions Required
• Airway threat • Respiratory or cardiac arrest • Sudden fall in level of consciousness • New drop in Sa02 requiring bag and mask ventilation • New or prolonged seizure • A medical review that has not been attended • You (or a family member/carer) think that the infant needs immediate review but they do not meet the above criteria	• Initiate neonatal resuscitation • If medical staff not present in NCCU, place Code Blue Paediatric Emergency Call (via 55)

Medical Review

Response Criteria	Actions Required
• New or worsening increased work of breathing • Increased rate of apnoea/ bradycardia/desaturation episodes • New drop in Sa02 consistently <85% • New increase in Fi02 by >10% • Mean blood pressure dropping by >10mmHg • Increase in rate of seizures (if known to have seizures) • PGL <2.6 and lethargic or jittery • You (or a family member/carer) think that the infant requires medical review but they do not meet the above criteria	• Page registrar with infant's name, location and contact number, requesting review within 30mins • Record observations every 15 minutes • If medical review not attended within 30mins, initiate Code Blue Paediatric Emergency Call

Shift Coordinator Review

Response Criteria	Actions Required
• Instability characterised by rising Fi02, more significant apnoea/brady/desat episodes, rising or falling blood pressure, temperature instability, lethargy or irritability • You (or a family member/carer) are worried about the infant but they do not meet the above criteria	• Shift Coordinator must review patient • Record observations at least every hour • Monitor oxygen requirement • Manage fever, pain, fluids, distress

Increased Surveillance

Response Criteria	Actions Required
• Changing observations not described above • You (or a family member/carer) are worried about the infant but they do not meet the above criteria	• Inform Shift Coordinator • Carry out appropriate interventions as prescribed • Record observations at least every 2 hours • Monitor oxygen requirement • Manage fever, pain, fluids, distress

CLINICAL HANDOVER

See NCCU Clinical Handover Guideline

Good handover is essential to recognising and responding to clinical deterioration.
All health practitioners are to handover the deteriorating patient using **i S o B A R** to assist the communication process when accountability and responsibility for patient care is transferred.

- **I**dentify
- **S**ituation
- **O**bservations
- **B**ackground
- **A**gree on a plan
- **R**ead back

REFERENCES

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