

Queensland Paediatric Emergency Care

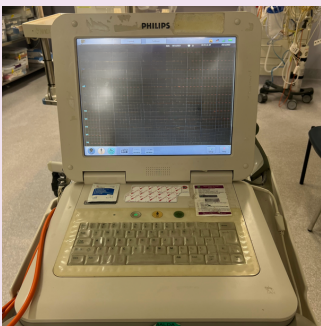
Skill Sheets

Electrocardiogram (ECG) in Neonates

Indications for when neonates may require an electrocardiogram include cyanosis, tachypnoea, increased respiratory effort, abnormal heart rate or rhythm, a Brief Unexplained Resolved Event (BRUE), feeding difficulties or when screening for congenital cardiac abnormalities.

1 GATHER EQUIPMENT

Gather ECG machine and ECG electrode stickers.



2 PREPARE

Explain the procedure and gain verbal consent.



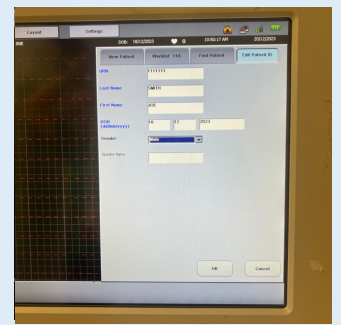
3

Attend to hand hygiene. Due to the limited body surface of neonates you may need to cut ECG electrodes in half.



4

Enter patient demographics into ECG machine.



5 PROCEDURE

Position the neonate in the supine position with chest exposed. Where able, conduct the ECG in a cot with overhead heating to reduce heat loss from exposure.

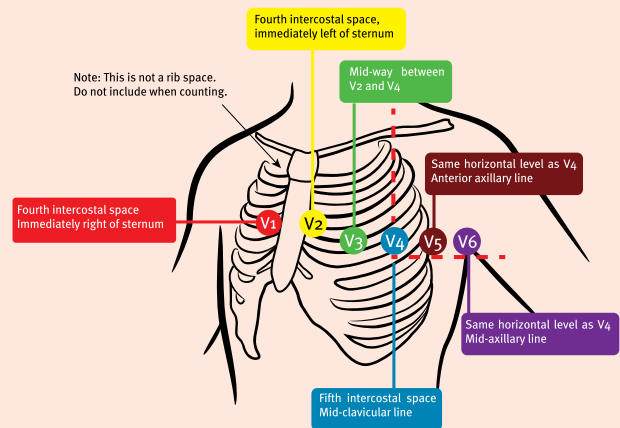


6

Attach cords to corresponding electrode. See diagram on page 2 for placement details.



ECG Electrode Placement



ALERT

Ensure the patient demographics are correct. Some ECG machine models patient data may be retained from a previous patient. Be sure to check the patient information screen for each new patient. Data assigned to the wrong patient can adversely affect diagnosis and treatment.

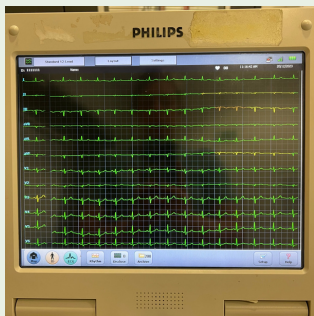


Procedural Distress

Consider the use of sucrose for reducing discomfort or distress by procedure. Refer to [Sucrose 24% Skill Sheet](#) for more details.

7

Capture ECG when the neonate is lying quietly and there is a clear trace with minimal artefact.



9

Consider leaving electrodes in place and cords in place. Cover the neonate in a wrap for warmth and leave with caregiver supervision.



10

Ask a medical officer to review the ECG. Post medical officer review, remove cords and electrodes. If available, use adhesive remover wipes to assist.



11

Ensure neonate has been re-clothed at the completion of ECG collection.



For further information:

[CHQ Paediatric ECG Checklist](#)

References:

Darling Downs Hospital and Health Service. (2021, July 7). 12 Lead electrocardiography (ECG). Accessed October 18, 2023 from https://qheps.health.qld.gov.au/__data/assets/pdf_file/0015/424122/3-02-008.pdf

Hockenberry, M.J. & Wilson, D. (2018). Wong's Nursing Care of Infants and Children (11th Ed.) Chapter 27: In The Child With Cardiovascular Dysfunction. pp962-963. Elsevier, St. Louis.

Queensland Health State-wide ED Nurse Educator Committee, Lucas, L., Opie, A., Ruff, C., Booker, C., Armit, L, QEDSAP, HIU. (Eds.) (2021). Unit 5 Cardiovascular. In Queensland Health: Transition Support Program - Emergency. Module 2 - Paediatric Care in the Emergency Department (5th ed.). State of Queensland (Queensland Health).

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- Providing care within the context of locally available resources, expertise, and scope of practice.
- Supporting consumer rights and informed decision making in partnership with healthcare practitioners including the right to decline intervention or ongoing management.

- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary.
- Ensuring informed consent is obtained prior to delivering care.
- Meeting all legislative requirements and professional standards.
- Applying standard precautions, and additional precautions as necessary, when delivering care.
- Documenting all care in accordance with mandatory and local requirements.

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