

CenTre & CoMET Standard Operating Procedure: Epoc NXS Blood Gas Analyser



Trust ref: C71/2024

1. Introduction and overarching policy/guideline

- The purpose of this standard operating procedure (SOP) is to ensure that the CenTre and CoMET transport teams are aware of the correct process for using the epoc NXS Blood Gas Analyser.
- The objective of the SOP is to outline the roles and responsibilities expected of all staff when using the epoc NXS Blood Gas Analyser to take patient blood gas samples in transport.
- The SOP will be widely disseminated and readily accessible.
- This SOP was written with reference to the UHL Point of Care Team (POCT) Guidance and Seimens manufacturer's instructions.

2. Scope

- The SOP applies to all members of staff within the Midlands Critical Care Transport Service (MCCTS) teams who are involved in the process of using the epoc NXS Blood Gas Analyser. The methods outlined in the SOP should be used at all times.

3. Definitions

- epoc- electronic point of care

4. General Principles

- This SOP seeks to standardise practice and ensure that correct procedures are adhered to at all times when analysing blood gas samples to ensure accurate and quality controlled.

5. Procedure

5.1 CoMET Team are to undertake a gas using the epoc NXS Blood gas analyser as per the standards below:

On Arrival if –

- Local team have not taken a gas in the last hour of CoMET Team arriving for any ventilated patient (inc NIV & hand bagging), unless child is stable and imminently moving to the Transport Ventilator.
- There are recent changes in ventilation or clinical status, seizures or deterioration.

- There is a suspicion of low glucose.

During stay if –

- Any sudden deterioration.
- 15 -20 minutes after change to CoMET ventilator, and before departure if this is delayed following previous gas (ETCO2 also to be documented at same time).

At receiving centre if –

- Significant deterioration or event during transport
- Patients ETCO2 increased during transport by > 2kpa
- Patient intubated and ventilated and transfer lasts more than 2 hours, ensure gas is completed prior to team departure irrespective of patient condition.

Recording Results –

Ensure all results measured on the blood gas are documented on the transport log in the allocated spaces. Please do not stick printed gases into patient evaluation.

5.2. CenTre team are to use epoc NXS Blood Gas analyser as per the standards below:

- The epoc NXS blood gas analyser is the standard tool used by CenTre for all blood gas analysis. If this is not possible then the team should use the local neonatal units blood gas analyser. Any deviation from use of the EPOC analyser by the CenTre team will be recorded with indications as to why in the transport log.

When to undertake a blood gas

Ventilated babies-

- Within 30 minutes of baby being put on to transport ventilator support.
- ETCO2 and TCO2 if available should be documented when taking a gas on our ventilator.
- Any change in ventilation settings for clinical reasons (swapping from the unit ventilator to the transport ventilator counts as a ventilator setting change).
- At the end of a retrieval and before the baby is swapped on to the receiving units ventilator.

Non-invasive Respiratory support-

- Babies on CPAP or Hi-Flow should have a blood gas performed after transferring to the transport ventilator for on going 'non-invasive' respiratory support.

Other scenarios

- Blood gas analysis for significant hypoglycaemia should be with the epoc NXS analyser.
- Other situations where there is significant clinical deterioration and blood gas analysis may help with clinical decision making.
- There is no indication for 'ROUTINE' blood gases.

5.3. Agreed default parameters/ settings – all parameters are set for each individual team requirements as agreed by each teams internal governance process.

6. General Maintenance & Storage of Device & Consumables

6.1. QC Procedure

Internal

- A L1, L3 & HCB QC will be required:
 - Routinely once a month for each epoc NXS blood gas analyser.
 - Each time new stock of test cards with a different LOT number are used.
 - Each time a new delivery of test cards are received.
- Once QC's are completed, the person completing the test will need to complete the QA checklist register.
- If the QA fails despite adjustments, ensure a member of the Senior Team is aware to investigate. Do not use device if failed QA.

6.2. Storage

- When not in use, epoc devices will need removing from red cases to be plugged in for charging in the designated space in the grab store.
- Epoc devices should be stored at between 15-30 degrees Celsius, and when out for transfer will need to be stored in the Red epoc insulated case in the ambulance. At the end of each transfer, these need to be returned back to their charging points in the grab store.
- epoc test cards must be stored in an upright position at room temperature.
- QC ampoules need to be stored in the refrigerator at 2-8 degrees Celsius. Unopened QC ampoules are stable at room temperature unopened for 1 week. PLEASE NOTE: once the ampoule is opened, the fluid should be drawn up and analysed immediately.

6.3. Health & Safety

- Standard control measures for handwashing and cleaning must be performed before and after the procedure
 - Personal Protective Equipment (PPE), should be work at all times in line with trust policy and infection prevention procedures.
 - After each test, the epoc device will need disinfecting using Clinell 2% Chlorhexidine & 70% Alcohol.
 - All used consumables to be disposed of as per Trust policy
 - Blood spillages must be dealt with in accordance with Trust policy.
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7. Education & Training

- Staff to ensure they undertake face to face training delivered by Siemens Rep or Clinical Cascade trainer and complete relevant competency documentation.
- Any persons undertaking blood sampling must have completed competency training.

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- As part of the induction process each team member will receive face to face training from a clinical cascade trainer and complete the relevant competency documentation.
- Any changes to the SOP will be widely communicated to relevant staff by the education or clinical practice leads.

8. Supporting References

POCT epoc Blood gas analyser quick Guide

Seimens instruction manual

[Infection Prevention UHL Policy](#) Trust ref: B4/2005

9. Key Words

Epoc, Blood Gas, Analyser

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.

As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

CONTACT AND REVIEW DETAILS			
SOP Lead – Lisa Liveing – Paediatric Transport Educator			Executive Lead Chief Nurse
Details of Changes made during review:			
Date	Issue Number	Reviewed By	Description Of Changes (If Any)
November 2024	1	CoMET & CenTre Governance	New document