



Guideline for Neurological Monitoring Associated With Obstetric Neuraxial Block

Initiated By	Cwm Taf Morgannwg University Health Board Anaesthetic Directorate
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CHANGE HISTORY

Version	Date	Author Job Title	Reasoning
1	Dec 2022	D. Nicolson Consultant Anaesthetist	National guidance

AUTHORSHIP, RESPONSIBILITY AND REVIEW

Author	D. Nicolson	Ratification Date	Dec 2022 (active May 23)
Job Title	Consultant Anaesthetist	Review Date	Dec 2025

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Introduction

Neuraxial anaesthesia (epidural, spinal or combined spinal–epidural (CSE)) is the preferred choice for operative delivery and neuraxial analgesia is widely available for pain-relief during labour. Like all interventions, there are risks associated with obstetric neuraxial blockade. Unexpectedly dense or persistent motor or sensory block may indicate serious underlying complications such as unintended intrathecal placement of an epidural catheter or very rarely, neurological pathology. Although most complications are relatively minor, serious neurological ones such as vertebral haematoma, infection and arachnoiditis may become permanent if not detected and managed rapidly – within 8–12 h in the case of epidural haematoma.

Aim

This guideline has been produced to guide the neurological monitoring of obstetric patients who receive neuraxial analgesia or anaesthesia, in order to support earlier detection of serious neurological complications and minimise harm.

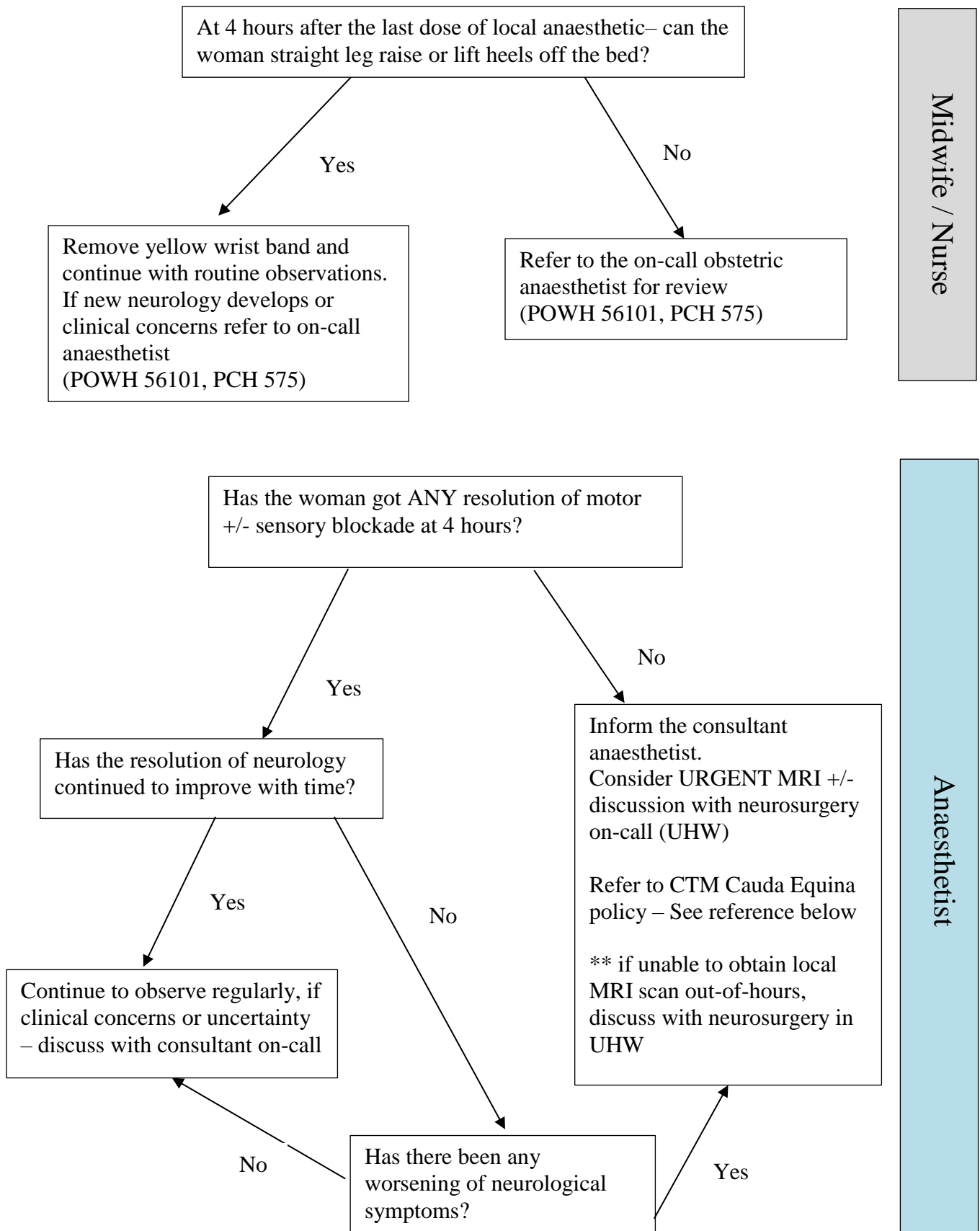
During Labour

- The midwife caring for a woman with an epidural, should check the epidural block hourly, including motor block, as per the Princess of Wales Obstetric Epidural Monitoring & Assessment Chart or the Prince Charles Hospital Epidural Monitoring Chart.
- The midwife should alert the anaesthetist if a woman is unable to straight-leg raise (being able to raise the heel off the bed against gravity, even if not sustained). Although minor degrees of motor block are common, any woman with profound motor and sensory block should be assessed by the anaesthetist. Ongoing concern should be escalated using the Management and Escalation Flow Chart below.

During the recovery phase after a spinal anaesthetic or epidural top-up for a procedure.

- The anaesthetist should inform the woman at the end of the operative procedure that she should be able to lift her leg straight up off the bed, four hours after the spinal or epidural top up.
- A yellow coloured armband should be placed on the woman's wrist with the time and date that she should be able to straight leg raise as a reminder to her and the staff.
- If the woman is unable to straight-leg raise at 4 h from the last dose of epidural/spinal local anaesthetic, the anaesthetist should be called by the midwife to assess whether the woman's care should be escalated to investigate the possibility of reversible causes of neurological injury - refer to the Management and Escalation Flow Chart below.

Neuraxial Monitoring Flow Chart



Reference

1. Safety guideline: neurological monitoring associated with obstetric neuraxial block 2020 - Association of Anaesthetists
2. CTM Cauda Equina Policy - Procedure: Patients Presenting with Suspected Cauda Equina Syndrome or Non-malignant Cord Compression - Health board intranet.