### Critical Care in Obstetrics Guideline

**Reference Number:**

**NHSCT/12/515**

**Target audience:**

This guideline is directed to all obstetricians, anaesthetists, paediatricians, neonatologists, midwives and neonatal nurses

**Sources of advice in relation to this document:**

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**Replaces (if appropriate):**

N/A

**Type of Document:**

Directorate Specific

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Policy, Standards and Guidelines Committee

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**NHSCT Mission Statement**

To provide for all the quality of services we would expect for our families and ourselves
Critical Care in Obstetrics Guideline

December 2011
Critical Care in Obstetrics Guideline

1.0 Introduction

Most pregnancies and deliveries are normal. Occasionally women will require High Dependency Care. This requires the right environment and right staff (www.ics.ac.uk/levels)

Definition of High Dependency Care

Women requiring
• More detailed observation or intervention including basic support for a single failing organ system, post-operative care and those stepping down from higher levels of care
• Stabilisation before transfer to Intensive Care Unit (ICU) where the following is required:
  o support for 2 or more organ systems
  o artificial ventilation
  o renal replacement therapy
  o risk of sudden catastrophic deterioration

2.0 Purpose

The purpose of this guideline is:
• To identify ‘at risk’ maternity patients and critical illness early
• Early and appropriate involvement of clinicians outside of the maternity service
• To outline the processes for ensuring that women receive high dependency care / intensive care in a suitable environment. In particular it specifies:
  o Admission criteria
  o The responsibilities for each staff group
  o Availability of correct equipment
  o When to involve clinicians outside the maternity unit
  o Agreed criteria for transfer to HDU/ ICU outside the maternity unit

3.0 Policy Statement

3.1 Admission Criteria

This applies to antenatal and postnatal patients.
A delay in recognition of a critical illness contributes to avoidable mortality and morbidity in pregnant women.
All women should have observations recorded on a modified obstetric early warning chart (PEWS).
Table 1: Examples of indications for admission to HDU

<table>
<thead>
<tr>
<th>Obstetric Indications</th>
<th>Non-obstetric indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eclampsia</td>
<td>Transfer from ICU</td>
</tr>
<tr>
<td>Sepsis</td>
<td>Other surgical procedures or complications related to surgical condition</td>
</tr>
<tr>
<td>Severe pre-eclampsia</td>
<td>Pneumonia/ respiratory embarrassment</td>
</tr>
<tr>
<td>Severe asthma</td>
<td>Hypertension</td>
</tr>
<tr>
<td>Major haemorrhage</td>
<td>Renal impairment</td>
</tr>
<tr>
<td>Diabetic ketoacidosis</td>
<td>Thyrotoxicosis</td>
</tr>
<tr>
<td>Thromboembolism</td>
<td>Cardiac or neurological co-morbidity</td>
</tr>
<tr>
<td>HELLP syndrome</td>
<td>Morbid obesity (BMI &gt;40kg/m²) with co-morbidities.</td>
</tr>
<tr>
<td>Puerperal sepsis</td>
<td></td>
</tr>
</tbody>
</table>

This list is not exhaustive and the need for HDU care should be assessed on an individual basis. When close monitoring is required, the midwife to patient ratio must be no more than one midwife to two patients. Basic competency trained staff should be available 24 hours a day.

3.2 Responsibilities of the Multidisciplinary Team

3.2.1 Obstetricians

The responsibilities of the Obstetricians are:

- To inform and involve a consultant obstetrician at an early stage
- Comprehensive review of the woman at least 3 times/24hrs and more often if the woman’s condition is unstable. This is in conjunction with Anaesthetist and relevant medical teams, a plan of care will be documented in the hospital records
- Ensure guidelines are used
- Review of any investigations when results available
- Liaison with other health care professionals as required
- Discussion of care with the woman and/or partner and documenting discussions in the hospital records
- Discussion of any potential transfer to ICU with consultant anaesthetist and ICU consultant and assist midwife in arranging transfer
- If intrauterine transfer is required to another unit/Trust, co-ordinate the following:
  - Transfer to the nearest available/appropriate hospital
  - Liaise with medical staff at the receiving hospital
  - Write a covering letter giving details on the reason for transfer and any relevant background information/investigations undertaken/treatment given
  - Ensure a plan of care is documented in the hospital notes (MHHR), which are transferred with the patient
  - Ensure that the woman is in a stablecontrolled state for transfer
3.2.2 Anaesthetists

The responsibilities of the anaesthetists involved in the provision of care to women requiring close monitoring are:

- Comprehensive review of the woman at least 3 times/24 hours and more often if the woman is unstable in conjunction with the obstetric team and documenting a plan of care in the hospital notes
- Review of any investigations when results are available
- Liaising with other health care professionals including as required
- Discussing care with the woman and/or partner and documenting discussions in the hospital records
- Discussing any potential transfer to ICU with consultant obstetrician and ICU consultant and assist midwife in arranging transfer
- Providing a comprehensive handover of care to the medical staff taking over care in ICU

3.2.3 Midwifery staff

The responsibilities of the midwifery staff involved in the provision of care to women requiring close monitoring are:

- To undertake physical observations for women who require close monitoring in the maternity unit and alert medical staff if there is deviation from the normal
- To document all care given in the MHHR
- Ensure the critical care pathway is completed
- To provide support for women and their partners/family
- To provide a comprehensive handover of care using the SBAR handover when transferred to any other care setting including ICU
- To complete clinical incident form

3.3 Equipment Requirements

HDU care should be conducted in the appropriate care setting with staff skilled and trained in this area. The basic equipment available in the close monitoring room is:

- Piped oxygen
- Suction equipment
- Resuscitation equipment including ready access to defibrillator
- Pulse oximeter
- Non-invasive blood pressure monitor
- ECG waveform monitor
- Calf compression device
- Invasive haemodynamic monitoring
- Level 1 fluid infuser
In addition:

- Daily stock check of drugs, equipment and fluids.
- Inspection of all resuscitation equipment resuscitation and any faults reported to ‘Estates’ and the item removed from service.
- A note be made in the communication book and the information passed on at each shift change so that all staff are aware.

### 3.4 Guidance on when to involve clinicians outside the maternity unit

Transfer out of the maternity unit requires the woman to be assessed jointly by a senior anaesthetist and a senior obstetrician and in some cases other disciplines that have been involved in the woman’s care e.g. renal, cardiac. Senior clinicians from other specialities will be involved in the care of the women where there is:

- Failure of more than one organ system
- Disease requiring the expertise of specialist medical teams e.g.
  - Renal failure, other than the impairment associated with pre-eclampsia
  - Hepatic failure
  - Respiratory disease especially that requiring ventilatory support
  - Cardiac disease, pre-existing or of recent onset
  - Neurological conditions
  - Endocrine disease including diabetes mellitus
  - Non-obstetric surgical problems

The outreach team should be consulted if there is a transition to or from the ICU or for help with a specialised problem e.g. high flow oxygen therapy

When the patient is stabilised sufficiently to transfer to a postnatal ward, this will be communicated to the midwife responsible for her care as well as the co-ordinating midwife. There should be a clear plan of on-going care and observations documented in the PEWS chart.

### 3.5 Criteria for Transfer

#### 3.5.1. Discharge criteria from HDU to ward

This will be when care can be managed on a maternity ward and must consider staffing levels, skill-mix and workload on the ward. A written treatment plan, including clear instructions about the continued level of observation and when to call medical staff, must be documented at the time of transfer. Continued support from the obstetric and anaesthetic staff may be required and must be provided. Transfer out of HDU should be a joint obstetric and anaesthetic decision and fulfil the following:

- Patient haemodynamically stable, no further continuous intravenous medication or frequent blood tests required
- No invasive monitoring required
When transferring a woman from HDU to the postnatal ward, a personal and detailed handover of care should be given from the midwife handing over the care to the receiving midwife using the SBAR tool for communication (Situation, Background, Assessment, Recommendation).

### 3.5.2 Criteria for transfer to ICU care

Women requiring ICU care are generally transferred to the ICU within the Trust. Following assessment of the woman’s condition, the decision for transfer will be made by the consultant Obstetrician and the Consultant Anaesthetist in liaison with other specialities as required. Women who require ICU care have usually more than one organ failure including:
- Women requiring advanced respiratory support (ventilation)
- Women requiring invasive renal support
- Exacerbation of pre-existing medical problem

Discharge from ICU is a consultant level decision and should be back to an obstetric HDU in the first instance unless otherwise directed. Again the transfer should be made person to person; the woman should be accompanied to the HDU area as there may be significant complications that require a more detailed handover. The woman and her family should be offered a full explanation of the events which led to the need for high dependency care and opportunities for the woman to ask questions and to discuss what happened to her made available.

### 4.0 Target Audience

This guideline is directed to all obstetricians, anaesthetists, paediatricians, neonatologists, midwives and neonatal nurses

### 5.0 Responsibilities

Directors are responsible for the dissemination and implementation of this guidance within the directorates.

Line managers are responsible for ensuring that staff have a working knowledge of and adhere to the guidance and that any amendments are disseminated.

All practitioners are responsible for familiarising themselves with and adhering to this guidance.
6.0 Equality, Human Rights and DDA

This guideline is purely clinical/technical in nature and will have no bearing in terms of its likely impact on equality of opportunity or good relations for people within the equality and good relations categories.

7.0 Alternative Formats

This document can be made available on request on disc, larger font, Braille, audio cassette and other minority languages to meet the needs of those who are not fluent in English.

8.0 Sources of advice in relation to this document

The guideline author, responsible assistant director or director as detailed on the guideline title page should be contacted with any queries on the content of this guideline.

9.0 References


**Critical Care Pathway**

**MUST DO**
- Braddon score
- Hrly documented pressure care
- Early mobilisation

**CONSIDER**
- Pressure relieving mattress
- Liaise with tissue viability nurse

**MUST DO**
- VTE assessment
- Active/passive exercises
- Encourage deep breathing exercise

**CONSIDER**
- Calf compression device
- Liaise with physiotherapist

**MUST DO**
- Accurate intake/output
- Observe for signs of pulmonary oedema
- Encourage deep breathing exercise

**CONSIDER**
- Oral hygiene if nil by mouth
- Liaise with dietician if nil by mouth

**MUST DO**
- Track observations as required
- Scores to act as trigger for action
- Escalate concerns

**CONSIDER**
- Analgesia management plan
- Liaise with infection control

**MUST DO**
- HII care pathways
- ANTT - Aseptic non-touch technique
- Blood work

**CONSIDER**
- Swabs, blood culture if symptomatic
- Liaise with infection control