GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol Bae Abertawe | Swansea Bay University Health Board

STANDARD OPERATING PROCEDURE

Standard Operating Procedure for the critically unwell obstetric patient

Speciality: Maternity

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Change History

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			Version 1

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1. PURPOSE

The purpose of the SOP is to ensure safe care is provided for critically ill pregnant or postpartum women who may require a level of care that cannot be safely provided in the Maternity High Dependency Unit in Singleton Hospital.

This SOP should be shared and discussed with the wider Health Board clinical teams, who will be key to ensuring timely review, assessment and investigations are undertaken. This will ensure decisions to transfer to the most appropriate clinical environments are made as soon as possible.

Learning nationally from maternal death reviews has highlighted the importance of excellent standards of team working and communication in ensuring the best outcomes in maternity care.

2. INTRODUCTION

Swansea Bay UHB provides all maternity care on the Singleton Hospital Site. This unit supports 3800 deliveries each year. Singleton Hospital no longer has an inpatient general medical cohort but there remains an onsite Registered Medical Officer (RMO) 24/7 with on call consultant cover for medical review and advice to obstetric patients.

Singleton currently provides an enhanced recovery unit (ERU) for post-operative elective surgical patients and limited level 2 care for unwell haematology/oncology patients. The unit can support invasive arterial monitoring and central lines. Nursing staff in ERU are trained to support peripheral vasopressors for post-surgical patients and central vasopressors for haematology and oncology patients. Patients with escalating vasopressor requirements or those requiring invasive ventilation must be transferred out to an Intensive Care setting.

3. SCOPE

Currently the majority of medically unwell obstetric patients are cared for on the main delivery suite. Any enhanced care is supported by the obstetric, midwifery and anaesthetic team in conjunction with support from the neonatal and adult critical care team when required. It is currently accepted that when the level of support that can be provided at Singleton is no longer sufficient or can be predicted as becoming insufficient that these patients should be transferred to Morriston Hospital or other tertiary hospital with appropriate services onsite such as University Hospital of Wales.

Discussion with regards to transfer should be initiated early and involve the on-call consultant for ICU in Morriston Hospital or suitable alternative site. The obstetric population are a heterogeneous population and as such a definitive list of all circumstances requiring transfer would not be possible to describe.

A detailed systems review of any unwell obstetric a patient using the Obstetric Critical Care Review pro-forma and will provide the obstetric MDT with an overview of the support that an obstetric patient may require.

<u>The predominant reasons for transfer are likely to include:</u>

- **Neurological conditions leading to reduced conscious levels, refractory seizure activity, intracerebral haemorrhage or head trauma.**
- **Cardiovascular instability requiring inotropes or vasopressors. This is often secondary to ongoing resuscitation following PPH and any patient requiring transfer with ongoing peripheral vasopressors should have these drugs converted centrally via central venous access.**
- **Primary cardiac disease requiring intervention.**
- **Persistent rhythm disturbances.**
- **Respiratory failure requiring escalating oxygen therapy and mechanical ventilation.**
- **Severe Sepsis requiring multi-organ support**
- **Any surgical intervention that definitely cannot be provided in Singleton. (In most instances it is easier for the surgeon to travel to the patient.)**
- **Renal replacement therapy.**
- **Haematological, Endocrine and Hepatic complications.**

This list is not comprehensive but outlines the heterogeneity of these transfers.
The Intensive Care society Guidelines for the provision of intensive care services includes a chapter outlining key standards relating to critically ill pregnant or recently pregnant women published in 2018. When transferring pregnant women to ICU these guidelines will support the provision of ongoing care.

4. PROCESS FOR ESCALATION OF THE DETORATING OBSTETRIC PATIENT IN SINGLETON

4.1. Any pregnant or recently pregnant women who is at high risk of deterioration should be highlighted and escalated to:

a. The midwife in charge and
b. The on-call obstetric team.
c. The on-call anaesthetic team

4.2. Advice should be sought early from the medical on-call cover in Singleton if this appropriate for this case. This escalation should trigger a multidisciplinary review of any unwell patient and discussion between the anaesthetic, obstetric and midwifery teams. This discussion must identify:

a. The level of the care the patient is currently receiving.
b. Whether this is currently sufficient.
c. What is the potential deterioration and likely required escalation of treatment.

4.3 In the event of a sudden or unexpected deterioration of a patient these steps must be considered once the initial critical event has been dealt with and the patient stabilised.

If the level of care is recognised as exceeding what can be appropriately and safely delivered within Singleton Hospital then a discussion between the MDT including the neonatal team should identify the next most appropriate place of care for this woman.

This is likely to be Intensive Care in Morriston Hospital however in a small number of cases this may require transfer of the patient to a unit further from Swansea either due to capacity issues or due to the clinical nature of the case. In all incidence of potential transfer the patient should be referred to and discussed with the on-call Intensive Care Consultant in Morriston. If the patient requires critical care stabilisation then the discussion with ICU should be facilitated by the most senior clinician available to discuss the patient. If Morriston ICU is not the appropriate destination for transfer of this patient then referral to the receiving centre will be required. This will involve discussion with the on-call obstetric team at the receiving site, the on-call critical care and ideally the obstetric anaesthetic team.

Midwifery handover and communication will be required in all incidence of transfer and all documentation will be required for transfer.

The transfer of critical unwell antenatal patients to a site that does not have onsite maternity cover must include a plan documenting the ongoing antenatal care and how the team should contact the obstetric and neonatal teams for advice, guidance or support should the patient require delivery. The GPICS guidance states that these patients should have daily obstetric review. If a patient with a viable pregnancy is transferred to Morriston then the GPICS standards must be adhered to with regards to provision of equipment and personnel as outlined in Appendix 1.

Levels of Clinical Care:

Level	Description
0	Patients whose needs can be met through normal ward care in an acute hospital.
1	Patients recently discharged from a higher level of care or in need of additional monitoring/clinical interventions, clinical input or advice or requiring critical care outreach service support.
2	Patients: needing pre-operative optimisation needing extended postoperative care stepping down to level 2 care from level 3 receiving single organ support/ basic respiratory support/ basic cardiovascular support/advanced cardiovascular support/renal support/ neurological support/dermatological support
3	Patients receiving advanced respiratory support alone or receiving a minimum of 2 organs supported.

(CQC Critical Care Inspection Framework)

4.4 The role of the Enhanced Care Unit (ECU) for obstetric patients

The role of ECU in looking after obstetric patients is extremely limited due to its distant nature from labour ward (meaning anaesthetic on call staff are then split across 2 areas). However, in rare circumstances it can be considered e.g. very high acuity on labour ward meaning there is not sufficient midwifery staff to care for the patient; no appropriate place to care for the patient on labour ward (both theatres busy) or as a temporary step down when a patient has returned from critical care in Morriston. These are just examples and clearly not an exhaustive list.

Admission to ECU should be discussed with the on call anaesthetic and obstetric consultant and the ICU consultant as to whether this is the most appropriate place for the patient.
Consideration should always be given to whether the antenatal patient would be better being transferred to a site that combines critical care, maternity and neonatal services.

5. TRANSFER/CONVEYANCE OF UNWELL OBSTETRIC PATIENT

*The majority of transfers of obstetric patients to critical care will be **time critical.** Before contacting WAST or ACCTS the patient must be **referred and accepted** to critical care in the receiving hospital.*

The referring team need to the call to The Medical Transfer Desk/ACCTS as they will have all the patient information and the request for transfer should be directed to The Medical Transfer Protocol Suite by dialling 03001239202 and selecting option 2. For emergency Transport.

The clinical condition of the patient and the requirement for any proposed intervention at the receiving site will guide the triage coding the patient is given. If WAST can provide a technician crew and a vehicle then the patient may be safely transferred with anaesthetic, midwifery and ODP support if this is deemed appropriate.

In the event of an out of hours transfer requiring Singleton staff to accompany the patient the anaesthetic consultant on-call must provide onsite cover as it is likely that the second on anaesthetist will be required to accompany the patient. In the majority of cases a midwife will also be required. The on-call obstetric team should be made aware of this staff absence to ensure that the ongoing care of patient’s onsite takes this into account. The presence of 2 resident anaesthetists on-site should ensure the safety of any ongoing emergency work.

For non time critical adult critical care transfers then ACCTS- the Adult Critical Care Transfer Service operate daytime critical transfers and may provide support if they are available. They can be contacted through their support desk on 03001232301

6. PROCESS FOR OBSTETRIC PATIENTS REQUIRING ECMO

Obstetric patients requiring ECMO are likely to be supported in Bristol if capacity allows.

All referrals for ECMO should be placed through national referral website:
https://www.signpost.healthcare/ecmo-referral-pathway
If your referral is time critical or you have difficulty submitting an online referral for any reason, please call the Retrieve Adult Critical Care Service on 0300 030 2222. Please clearly tell the operator your hospital location and state that you are making an ECMO referral, and they will connect you to the duty Bristol ECMO coordinator.

7. FOLLOW UP

Antenatal patients that are transferred within SBUHB will require a detailed ongoing antenatal plan. They should receive daily obstetric and midwifery review. In the case of improvement and step down of these patients this must be accompanied by a MDT handover including anaesthetic, midwifery obstetric and neonatal teams to

ensure appropriate ongoing obstetric care. It would be appropriate for any antenatal critical step down patient to receive a review on labour ward on their return to Singleton.

In the event of a postnatal transfer to critical care the postnatal plan should detail what midwifery and obstetric review is required during this time and where the patient should be discharged to on leaving critical care.

A record of any patients transferred from Singleton and their current location and condition must be maintained on delivery suite in Singleton to ensure that these patient are receiving appropriate care and follow up. These patients should be discussed as part of the daily labour ward multidisciplinary team handover. Additionally any woman transferred to another ITU or another unit should be Datix reported in line with the maternity services incident trigger list.

Psychological support and debrief may be required for any obstetric patient who has been transferred for critical care support and this should be identified and offered following review. This type of support may vary in nature and delivery depending upon the individual.

8. TELEPHONE NUMBERS:

Critical Care Consultant on-call in MH during day: Cisco: 37807
On-call Consultant for ICU: can be contacted via switch out of hours.
Critical Care Registrar on-call: Cisco: 30600
Nurse in charge: Intensive Care Unit: 33479
ITU Reception: 33447
The Medical Transfer Protocol Suite: 03001239202
WAST/ACTS: 03001232301.

9. STANDARD OPERATING PROCEDURE (SOP) RESPONSIBILITIES

The responsibility for the procedures described in this SOP applies to:

- Maternity Staff
  - Labour Ward coordinator
  - Midwives

- Obstetric Staff
  - Consultant
  - Registrar (including on-call gynae registrar)
  - SHO

- Anaesthetic Staff
  - Consultant
  - Registrar

- Medical Team
  - Consultant physician
  - Registrar physician

- Surgical Team
    - Surgical Consultant
    - Surgical registrar

- Intensive Care Staff
    - Consultant Intensivist
    - Registrar Intensive care
    - Lead Nurse Intensive Care

- Operational Staff
    - Bed Manager
    - Managers on-call across Health Board

10. MONITORING

The maternity service has ITU transfers and critically ill women included as a trigger on the maternity incident reporting requirements. All incidents will be part of a review process and will include the application of the SOP any themes or lessons will be shared.

Appendix 1: Intensive Care Society Guideline exert

The following section is an exert from the Intensive Care Society Guidelines:
Intensive Care Society:* *The* *Guideline* *for the Provision of* *Intensive Care* *Services (*GPICS*)* *iGPICS

Chapter: 4.10 Care of the Critically Ill Pregnant (or Recently Pregnant) Woman
Authors: Audrey Quinn & Laura Vincent

INTRODUCTION *This chapter summarises the key standards and recommendations relating to the management of the critically ill pregnant (or recently pregnant within 42 days of birth) woman admitted to a critical care unit published in the intercollegiate guidelines: Care of the Critically Ill woman in Childbirth; Enhanced Maternal Care 2018.*

STANDARDS

1. Any critical care unit that admits antenatal women over 20 weeks' gestation must have rapid access to obstetric and paediatric services able to attend in an emergency. There must be a clear plan and equipment immediately available for performing a peri-mortem caesarean section in the event of maternal cardiac arrest, with appropriate neonatal resuscitation equipment.

2. An obstetric team (normally a consultant obstetrician, a consultant obstetric anaesthetist and a midwife) must review all pregnant women admitted to critical care at least once in every twenty-four-hour period.

3. In antenatal ICU admissions, when fetal viability is a possibility, a health care professional trained in neonatal resuscitation must be available within 10 minutes and a senior neonatologist or paediatrician must be able to attend within 30 minutes.

4. All critical care units that admit pregnant or recently pregnant women must have a named lead clinician for maternal critical care (MCC). The main function of this role is to be the point of liaison between critical care and obstetric services (including obstetric anaesthesia).

5. Breast feeding (including the use of breast pumps) must be encouraged and supported in all post-natal women admitted to critical care.

6. Women who require care that falls outside EMC must be referred as soon as possible to the general critical care service. The route of escalation to critical care services must be clearly defined.

7. Critical care outreach or equivalent must be available and provide clinical support and education into EMC.

8. Critically ill pregnant or recently pregnant women who undergo intra- or inter-facility transfer must be transferred in accordance with standards equivalent to the FICM/ICS guidance for the transfer of the critically ill adult.

Appendix 2: Maternal Critical Care Structured Review

<table>
<tr><th colspan="3">Maternal Critical Care Structured Review</th></tr>
<tr><td colspan="2">This is designed to be used in the multi-professional review of a critically ill pregnant or post-partum woman.
It does not replace the observations on the maternal critical care chart
Relevant notes can be made as each item is considered and either directly into the notes or by annotating the worksheet, which should be dated, signed and filed in the patient's notes at the end of the review.</td><td>Patient name (or addressograph)
…………………………………………………
Hospital ID or NHS number
………………………………………………..
Date of birth
………../……………/………………</td></tr>
<tr><td colspan="3">**Staff present for review (names and roles):**
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
…………………………………………………………………</td></tr>
<tr><th></th><th>Item to be considered</th><th>Notes</th></tr>
<tr><td>**A**</td><td>**Airway**</td><td></td></tr>
<tr><td>**B**</td><td>**Breathing** (RR, Oxygen sats, Oxygen, chest examination)</td><td></td></tr>
<tr><td>**C**</td><td>Circulation (Heart rate, BP, Cap refil, vasopressor infusions)</td><td></td></tr>
<tr><td>**D**</td><td>**Disability** (AVPU, tendon reflexes, pain, spinal or epidural block)</td><td></td></tr>
<tr><td>**E**</td><td>**Electrolytes** (Mg, Na, K levels and Ur and Cr)</td><td></td></tr>
<tr><td>**F**</td><td>**Fluids** (Input / output / blood loss / drains)</td><td></td></tr>
</table>

G	**GI and glucose control** (Gastro-protection, bowels and blood sugar)	
H	**Haematology** (FBC, clotting, VTE prophylaxis)	
I	**Infection** (Temperature, sepsis bundle, inflammatory markers, cultures and antibiotics)	
L	**Lines** (Cannulae, Arterial, Central line, urinary catheter and wound drains)	
M	**Maternal co-morbidities** (Diabetes, hypertension, asthma, etc)	
N	**Neonatal considerations**	
O	**Obstetric considerations**	
P	**Pharmacology** (Review drug chart)	
Q	**Questions**	
R	**Recommendations**	

	Summary
	Signature…………………………………………… Print…………………………………………………… Date ………………../…………………../……………………

REFERENCES

20191218_Core_service_framework_for_critical_care_for_NHS_and_IH_providers_v8.pdf (cqc.org.uk)

Other SBUHB supporting documents relevant to this document:

Obstetric MEOWS chart. Current agreed MEOWS chart

Standard Operating Procedure (SOP) for: Breastfeeding mothers admitted to hospital Version Number 3 Version Date January 2023 Author Heather O'Shea Infant Feeding Coordinator

Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

Title of Guideline:	Standard Operating Procedure for the critically unwell obstetric patient
Name(s) of Author:	Q&S
Chair of Group or Committee approving submission:	Quality and Safety
Brief outline giving reasons for document being submitted for ratification	
Details of persons included in consultation process:	
Name of Pharmacist (mandatory if drugs involved):	
Issue / Version No:	
Please list any policies/guidelines this document will supercede:	
Date approved by Group:	21 October 2024
Next Review / Guideline Expiry:	21 October 2027
Please indicate key words you wish to be linked to document	Transfer, ITU, critical
File Name: Used to locate where file is stores on hard drive	Z:\Maternity\Policies and Guidelines\Obs\2020 onwards\SOPs\SOP Critically unwell obstetric patient\SOP for the critically unwell obstetric patient V3.docx