Care of Pregnant women admitted outside of the Maternity Unit (ED and elsewhere within UHL) - Trust wide

NHS University Hospitals of Leicester NHS Trust

Trust ref: B32/2011

1. Introduction and Who Guideline applies to

This guideline is for the care of pregnant and postnatal (up to and including 42 days postpartum) female persons of any age admitted outside the Maternity Service, and is therefore for all Nursing, Midwifery and Medical (obstetric and non-obstetric) staff employed throughout UHL.

Pregnant females, regardless of their age, may require admission outside Maternity with conditions that are not directly related to pregnancy, and may need to be cared for in appropriate specialist areas elsewhere in the Trust. In many cases of minor or transient non obstetric illness, formal obstetric input may not be required. However, given that pregnancy may impact on maternal physiology and disease process, fetal condition, and, on the other hand, concomitant illness may impact on care provision and management planning in terms of future ante- and peri-partum care, it is essential that all pregnant and recently postnatal women who are significantly unwell are notified to the Obstetric team, regardless of where they will be admitted within the Trust.

2. Guideline Standards and Procedures

Pregnant and postnatal females of any age (up to 42 days post-partum) may be admitted to the UHL with pregnancy related or non-obstetric problems.

The following principles should apply in all settings:

- All female persons in the reproductive age group who are admitted outside maternity should be asked about the possibility of pregnancy and/or having recently given birth, and a pregnancy test should be performed where appropriate.
- In all pregnant females who suffer significant abdominal trauma or injury, including blunt trauma, Rhesus incompatibility should be considered and Obstetric advice regarding need for anti-D Ig should be sought if there is any uncertainty.
- Emergency or life-saving treatment (and/or relevant investigations and imaging) in women with non-obstetric illness/trauma should NOT be delayed because of pregnancy. The duty of care is primarily to the woman. In most instances there will be time to seek Obstetric advice where required, in others Obstetric intervention may be necessary to improve outcome of the treatment. See referral pathways for appropriate action to take in this case.
- Where there is uncertainty as to the safety of specific investigations in pregnancy, obstetric opinion should be sought to discuss risk / benefit balance in a timely manner to avoid delay in essential investigations or treatment.

Referral Pathways:

2.1 Emergency Department (referral pathway 1)

a. **Pregnancy related condition at <16 weeks gestation** (e.g. vaginal bleeding, abdominal pain, severe hyperemesis, collapse in early pregnancy with suspected ectopic) - these patients are assessed by ED clinical staff and initial treatment is provided if required.
They are then referred to the **Gynaecology Assessment Unit (GAU)** by contacting GAU directly on extension **16259/17793** or ext **16305** emergency number in urgent cases. For further information refer to the following:

- Hyperemesis Gravidarum and Vomiting UHL Gynaecology Guideline
- Miscarriage UHL Gynaecology Guideline
- Ectopic Pregnancy UHL Gynaecology Guideline

LMP is not a good way of assessing gestational age. Palpation of the uterus will provide more information. If uterus not palpable it is likely to be less than 16 weeks gestation.

b. **Pregnancy related condition at ≥ 16 weeks gestation and up to and including 42 days post-partum** (e.g. symptoms and signs of severe pre-eclampsia/eclampsia, ante- or postpartum haemorrhage, signs of labour, puerperal sepsis) - these patients are assessed by ED clinical staff and initial urgent treatment is provided if required. (See Appendix 1 & 2 for further details).
They are then referred to **Maternity Assessment Unit (MAU)** at LRI via Nerve Centre. In patients who are very unwell (significant haemorrhage, collapse, eclamptic seizures, severe sepsis) phone the Obstetric Emergency Phone ext **17765** or fast bleep Obstetric Emergency Team via **2222**.The patients may need to be assessed and managed initially in ED, or transferred directly to Delivery Suite, depending on clinical circumstances. Women attending with abdominal pain and PV loss and not unwell should be referred to MAU via Nerve Centre.

c. **Women with a pregnancy of any gestation and up to and including 42 days post-partum with clinically significant non obstetric illness/trauma.**

These patients are assessed by ED clinical staff and initial urgent treatment is provided as required. Investigations and management, including referral to the relevant specialist, should follow usual ED guidance. All these patients should be assessed using MEOWS (Appendix 1& 2) and NOT NEWS. Additionally, ALL pregnant and postnatal women unwell enough to require admission to the hospital should be notified to the Obstetric team by contacting the Maternity Bleep Holder (on bleep 4001), who will inform key members of the Obstetric team. In the case of acutely ill or collapsed pregnant women who require urgent Obstetric input/fetal assessment and/or a perimortem Caesarean section in ED, ring Obstetric Emergency Phone ext **17765** or fast bleep Obstetric Emergency Team via **2222**.

2.2 Clinical areas/Acute wards within the UHL other than ED (referral pathway 2)

a. **Pregnant females at any gestation** with clinically significant non obstetric illness who require admission to the UHL (any site) should be notified to the Obstetric team by contacting the Maternity Bleep Holder (on bleep **4001**), who will in turn inform key members of the Obstetric team at the relevant UHL site (please note that there is an Obstetric on call team at both LRI and LGH).

It is the responsibility of the relevant clinical area's nursing and medical staff to notify the Maternity Bleep Holder.

3. Obstetric Action in Pregnant Women with Non Obstetric illness/trauma

- Once contacted, specific action by the Obstetric Team will depend on the nature and severity of the episode. This may include one or more of the following measures:

  i. Immediate review of patient in ED/other clinical area/acute ward where necessary, by Obstetrician and/or Midwife as appropriate
  ii. Plan is made for review at a later date, after treatment for non-obstetric problem has been commenced. This may include fetal monitoring.
  iii. Plan for follow up in Maternity if condition may potentially impact on future antenatal or peripartum care
  iv. Telephone advice where appropriate

  - Where a Maternity Bleep Holder is notified, he/she should in turn inform Delivery Suite Co-ordinator at relevant site (LRI for patients admitted to LRI and Glenfield, LGH for patients admitted to LGH) and the on-site Obstetric team.

  - Where the patient requires urgent review and Obstetric Emergency team is contacted by ED clinicians, the Consultant Obstetrician should be informed by the Senior Registrar/Registrar or Senior Midwife immediately via emergency number on delivery suite 17765.

    - Where Senior Obstetric input is urgently required and the Consultant Obstetrician for the site is not immediately available, escalation as per Referral Handover of Care and Transfer UHL Obstetric Guideline **Trust ref: C101/2008** should be implemented.

  - The patient's details and location should be documented and noted in the Outlier section of D/S Board at relevant site (LRI D/S for women admitted to LRI/Glenfield, LGH D/S for women admitted at LGH).

  - The patient should be discussed on each Ward round with Senior Obstetric staff and a plan should be made for Midwifery or Obstetric medical input if required.

  - A follow up plan should be made where patient requires antenatal or peripartum care beyond that offered as routine (anaesthetic assessment, additional clinic appointments, specialist services, delivery planning etc...).

Perimortem Caesarean Section

When a cardiac arrest occurs in a pregnant female of any age, standard resuscitation guidelines apply. However, in pregnancies >20 weeks gestation, venous return and cardiac output is compromised by the gravid uterus.

Success of CPR and maternal survival increases if the uterus is emptied. Where cardiac arrest occurs and cardiac output is not restored by **4 minutes** of CPR, a Caesarean section should be considered and performed at **5 minutes** of resuscitation effort.

This procedure is done to save the woman, and not on behalf of the fetus. The viability or condition of fetus is not a consideration in this scenario. As the woman would lack capacity in this situation, unless there is an advanced directive to the contrary, the uterus should be emptied in the woman's best interest. The neonatal team should be called to assess the newborn, even at gestations below 24 weeks, in case of inaccurate dates.

If this occurs in the community then Maternity Team should be informed as soon as possible.

Contact the Obstetric Emergency Team via 2222.

3. Education and Training

No specific training requirements outside those pertaining to related guidelines.

4. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Admission with non- obstetric problem to: - ED - Elsewhere in the Trust Did the patient fulfil criteria to be notified to Obstetric team? If yes, Was patient notified to the obstetric team? If patient required Obstetric review (not just phone advice), were they reviewed?	Retrospective review of health records	Senior Midwives for Intrapartum and Inpatient Services	Biannually (every two years)	Maternity Service Governance Group

5. Supporting References

1. CMACE (2011) Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer— 2006–08The Eighth Report of the Confidential Enquiries into Maternal Deaths in the United Kingdom. CMACE PAT/T 37 v.4 Page 8 of 13

2. Confidential Enquiry into Maternal and Child Health (CEMACH) (2007) Saving mother's lives. Reviewing maternal deaths to make motherhood safer – 2003-2005. London: CEMACH [Online]. Available from: www.cemach.org.uk
3. Confidential Enquiry into Maternity and Child Health. (2004). Why Mothers Die 2000-2002. London: RCOG Press. Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) (2001) 8th Annual Report into Stillbirths and Deaths in Infancy. London: CEMACH
4. Saving lives, Improving Mother's care. Maternal, Newborn, Infant clinical Outcome Review Programme. Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2015 – 2017. MBRRACE UK. (November 2019).

6. Key Words

Emergency Department, Gynaecology, Perimortem Caesarean Section, Trauma

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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.

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT			
Author / Lead Officer:	Original Working Party	**Job Title: Consultant Obstetricians, Consultant in emergency medicine, Consultants in Anesthesia, Senior Midwives**	
Reviewed by:	Humera Ansar – Consultant, Fran Hills - Consultant, Nicola Ling - Consultant and Pauline Coser – MAU Manager, Alasdair Moffat - Consultant		
Approved by:	Policy and Guidelines Committee		**Date Approved: 23/07/21**

REVIEW RECORD			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
September 2012	2	L Matthews and A Akkad	Methods of contacting obstetric team simplified
September 2017	3	L Matthews, A Akkad, M Wiese	New flow charts. General review and further clarity added
Feb 2021	4	Humera Ansar, Fran Hills, Nichola Ling and Pauline Coser. Alasdair Moffat	Referral pathways reviewed and clarified, new flow charts added. Methods of contacting Obstetric Team via Nerve Centre. ED management flow charts updated
Jan 2022	4.1	Fiona Ford	Obstetric emergency contact number updated

DISTRIBUTION RECORD:			
Date	**Name**	**Dept**	**Received**
July 2021	All Midwives, Obstetricians, ED leads and Matrons	Maternity, ED and all relevant areas of UHL	

Appendix 1: LRI ED Department Decision aid for major trauma or critical illness in the pregnant patient

Created by A Moffat. Design courtesy of Martin Wiese Version 01

Trust Ref B32/2011

LRI Emergency Department

Decision aid for major trauma or critical illness in the pregnant patient

Use for all pregnant patients **>16+0 wks to 42 days postpartum** presenting with medical / surgical problem or trauma

Approved UHL PGC, ED, MAT GOV On August 2021 Review due August 2024

Seen by:

Grade:

Date: **Time:**

Patient Details

Full Name:

DoB:

Unit number:

Brief assessment including MEOWS score

Any life threatening feature (box 1)? Y → Call the Obstetric Emergency Team **NOW** **For expected members see box 3**

Time call made:

N

Any severe features (box 2)? Y → Request **IMMEDIATE ATTENDANCE** of the most senior resident obstetrician AND obstetric anaesthetist (box 4)

Time call made:

N

Is the problem purely pregnancy related?

Y → Referral to be completed through nervecentre e-referrals, follow up with phone call to MAU if ≥16/40 or P/N GAU if ≤/15+6 if urgent

N → Obtain specialty review as appropriate and then notify maternity bleep holder (bleep 4001)

BOX 1: Life threatening features

- ☐ Periarrest/Arrest
- ☐ Vaginal bleeding
  >1000ml antenatal
  >1500ml postnatal (see appendix 2)
- ☐ Eclampsia
- ☐ Any trauma requiring ER
- ☐ Significant trauma to the abdomen
- ☐ Any medical condition requiring critical care transfer
- ☐ Surgical condition requiring immediate operation
- ☐ GCS <8
- ☐ Any severe feature where intrauterine death is suspected or confirmed

BOX 2: Severe features

- ☐ Confusion or reduced conscious level (GCS <12)
- ☐ Vaginal bleeding
  - ☐ 50-1000ml antenatal
  - ☐ 500ml postnatal (appendix 2)
- ☐ Systolic Hypertension >160 mmhg
- ☐ MEOWS >6

Box 3: Obstetric Emergency Team

Obstetric SR, Registrar & Junior
Obstetric Anaesthetist
Obstetric Theatre Team
Neonatologist
NB Consultant Obstetrician does NOT carry crash bleep, can be contacted on mobile via switch

Whilst awaiting obstetric team

- Site two large bore cannulae
- Obtain bloods including G&S
- Insert urinary catheter with hourly bag
- If >20 weeks gestation, use left lateral tilt or manual uterine displacement
- Continue management as per non-pregnant patient

DO NOT DELAY ANY EMERGENCY INVESTIGATIONS OR LIFESAVING TREATMENTS DUE TO PREGNANCY

Box 4: Obstetric team contact:

8am-10pm Obstetric consultant via switchboard
22:00-08:00 SR bleep 4294
Labour ward red phone 17765
Obs Anaesthesia contact
08:00-22:00 Consultant obstetric anaesthetist via switchboard
22:00-08:00 SR bleep 4127
Escalate to on-call consultant via switchboard if no timely response from either team

Modified Obstetric Early Warning Score (MEOWS):

	Date:															
	Time:															
Respiratory Rate	>30								3							
	26-30								2							
	21-25								1							
	11-20								0							
	<10								3							
Temperature	>39								2							
	38-38.9								1							
	37-37.9								0							
	36-36.9								0							
	35-35.9								1							
	<34.9								2							
Heart rate	>170								3							
	160-169								3							
	150-159								3							
	140-149								3							
	130-139								3							
	120-129								2							
	110-119								2							
	100-109								1							
	90-99								0							
	80-89								0							
	70-79								0							
	60-69								0							
	50-59								1							
	40-49								1							
	<39								2							
Systolic BP	>200								3							
	190-199								3							
	180-189								3							
	170-179								3							
	160-169								3							
	150-159								2							
	140-149								1							
	130-139								0							
	120-129								0							
	110-119								0							
	100-109								0							
	90-99								1							
	80-89								2							
	70-79								2							
	60-69								3							
	50-59								3							
	<49								3							
Diastolic BP	>130								3							
	120-129								3							
	110-119								3							
	100-109								2							
	90-99								1							
	80-89								0							
	70-79								0							
	60-69								0							
	50-59								0							
	40-49								1							
	<39								1							
Neuro response	Alert								0							
	Voice								1							
	Pain								2							
	Unresponsive								3							
Total MEOWS																
Initial/signature																

Appendix 2: LRI Emergency Department Management of Post-Partum

Created by A Moffat. Design courtesy of Martin Wiese Version 01

Trust Ref B32/2011

LRI Emergency Department

Management of Post-Partum Haemorrhage in the Emergency Department

For patients who have bled more than 500ml after delivery, or have ongoing bleeding

Approved UHL PGC, ED, MAT GOV

On August 2021 Review due August 2024

Seen by:

Grade:

Date: Time:

Patient Details

Full Name:
DoB:
Unit number:

(Use sticker if available)

MAJOR PPH
Request **IMMEDIATE ATTENDANCE** of the most senior resident obstetrician AND obstetric anaesthetist. Complete actions from box 2

Time call made:

N

>1500ml blood loss or >150ml/min

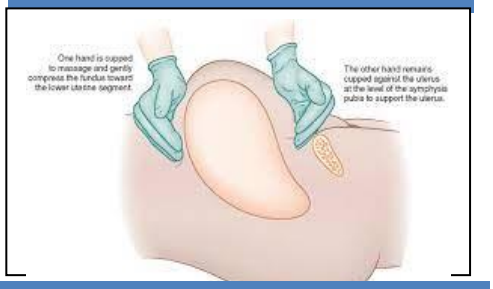
Y

MASSIVE PPH
Call the Obstetric Emergency Team **NOW**
Complete actions from box 1

Time call made:

Box 1: Massive PPH Bundle

- ☐ Give O2 15l/min via NRB
- ☐ Site 2 large bore cannulae
- ☐ Crossmatch 6 units
- ☐ Commence IV fluid resuscitation
- ☐ Declare major haemorrhage protocol via 2222
- ☐ Empty the bladder
- ☐ Palpate uterus to "rub-up" contraction
- ☐ Bimanual compression (externally)



Infusion fluids:
Crystalloid:
Maximum 2 litres
Blood
Cross matched if available, type O if not
Do not give group O RhD negative blood to patients known to have anti-C antibodies

Give oxytocin 10 units IM and tranexamic acid 1g IV

Bleeding stopped? Y

N

Hypertensive or history of hypertension? N

Y

Give syntometrine 1ml IM

Bleeding stopped? Y

N

If having to repeat Carboprost dose, Obstetric Consultant should be aware and plans to move to theatre should be in place

Asthmatic N

Y

Carboprost 250microgram **IM**
Can be repeated at 15 minute intervals to a maximum of 8 times

Bleeding stopped? Y

N

Misoprostol 800microgram PR
Other interventions will be dictated by the senior obstetric team

Monitor MEOWS
15 minute observations
Transfer to labour ward when safe

Box 2: Major PPH Bundle

- ☐ Give supplemental oxygen
- ☐ Site 2 large bore cannulae
- ☐ Crossmatch 4 units
- ☐ Empty the bladder
- ☐ Commence IV fluids
- ☐ Record fluid balance, with accurate estimation of blood loss

Medications given	Time
☐ Tranexamic Acid 1g IV	
☐ Oxytocin 10microgram IM	
☐ Syntometrine 1ml IM	
☐ Carboprost 250microgram IM	
☐ Carboprost 250microgram IM	
☐ Carboprost 250microgram IM	
☐ Carboprost 250microgram IM	
☐ Carboprost 250microgram IM	
☐ Carboprost 250microgram IM	
☐ Carboprost 250microgram IM	
☐ Misoprostol 800mcg PR	

Also prescribe on prescription chart

Modified Obstetric Early Warning Score (MEOWS):

	Date:															
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Respiratory Rate	>30								3							
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Total MEOWS																
Initial/signature																