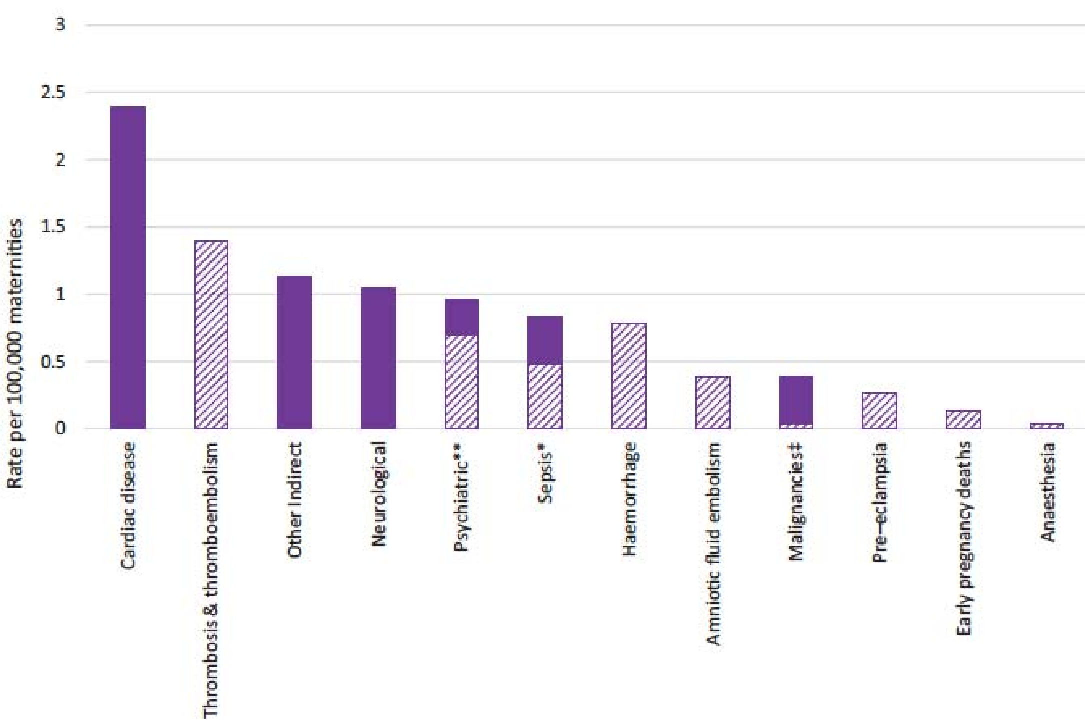
# Acute care toolkit 15
# Managing acute medical problems in pregnancy Oct 2019

## Appendices

**Appendix 1: Checklist for the management of pregnant women on the AMU**

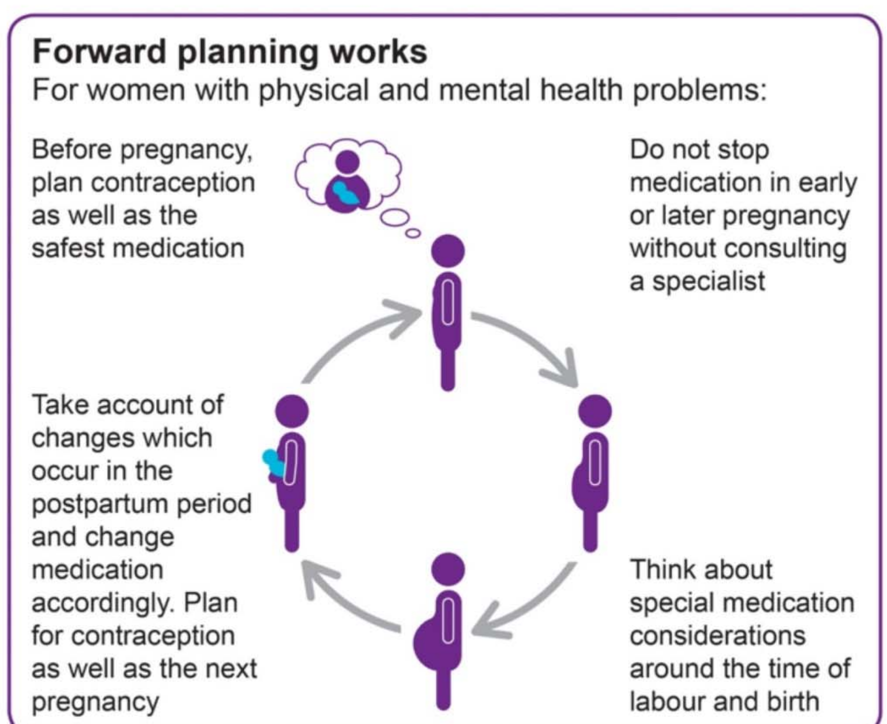
| | Standard | Yes | No | Action required |
|---|---|---|---|---|
| | Named clinical lead from acute medicine to liaise with obstetrics | | | |
| | Named clinical lead from obstetrics to liaise with acute medicine | | | |
| | Contact details for emergency obstetrics on-call or midwife readily available to staff on the acute medical unit | | | |
| | All clinical staff receive ongoing education and training in the management of acute medical problems in pregnancy and the postpartum period (including use of MEOWS) | | | |
| | Escalation measures in place for the acute deterioration of a pregnant woman | | | |
| | Local inpatient shared care pathways/services in place for pregnant women presenting with acute medical problems, including where they should be cared for | | | |
| | Local clinical guidelines are available for staff looking after pregnant women presenting with acute medical problems | | | |
| | Joint inpatient medical and obstetric care for women with complex medical problems (such as inflammatory bowel disease, connective tissue diseases, cardiac disease) and acute medical problems where a decision may need to be taken regarding timing of delivery. | | | |

**Appendix 2:** Maternal mortality by cause (UK and Ireland), 2014–16. Reproduced with permission from MBRRACE-UK.[1]



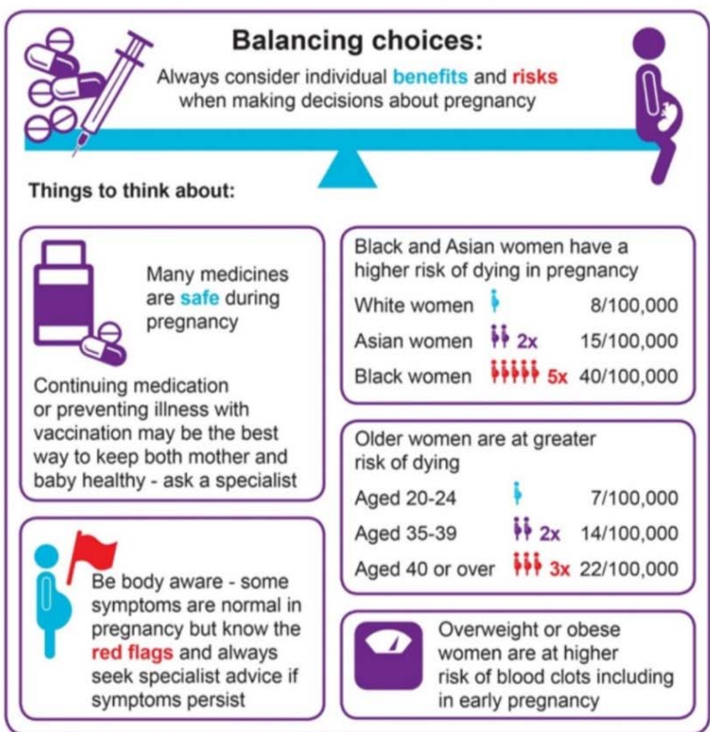

Hatched bars show direct causes of death; solid bars indicate indirect causes of death.
*Rate for direct sepsis (genital tract sepsis and other pregnancy-related infections) is shown in hatched and rate for indirect sepsis (influenza, pneumonia, others) in solid bar.
**Rate for suicides (direct) is shown in hatched and rate for indirect psychiatric causes (drugs/alcohol) in solid bar.
‡Rate for direct malignancies (choriocarcinoma) shown in hatched and rate for indirect malignancies (breast/ovary/cervix) in solid bar.

**Appendix 3:** Forward planning works. Reproduced with permission from MBRRACE-UK.[1]



Women of childbearing age admitted to an AMU should be given the opportunity to discuss any pre-existing medical condition and how it could affect or be affected by a pregnancy.

**Appendix 4:** Balancing choices. Reproduced with permission from MBRRACE-UK.[1]



**Appendix 5:** Quality assurance and improvement.

It is a challenge to monitor quality of care for a low volume of presentations and conditions. It is important to identify local shortfalls in quality and then work to improve performance.

The model for improvement asks three questions:

1. **What are we trying to achieve?**

- Best clinical outcomes for mother and baby; best experience for mother and family
- Staff who are confident and competent to deliver best care

2. **How will we know whether what we are achieving / changes lead to improvement?**

- 6-monthly case-note review of a sample of women admitted to medical wards / AMUs coded as pregnant, using a structured approach such as Structured Judgement Review.[2]
- Checklist for case note review for pregnant and postpartum women, or women of childbearing potential admitted to AMUs/wards (sample checklist in Appendix 6 below)
- Patient experience survey
- Clinician confidence in care survey

3. **What changes can you make that lead to an improvement?**

Once the service has been assessed and areas for improvement identified, form a multiprofessional team to develop an improvement programme, ideally including patients. Link with your organisation's quality improvement team, and agree priorities in departmental meetings. Doctors and other clinical staff in training can be a great resource for this type of improvement work, supported by the department and organisation.

**Co-production of improvement ideas with patients is important.** New mothers are often keen to take part in service improvement, although practical needs of childcare need to be considered. Experience-based co-design can be a practical approach.[3]

**Appendix 6:** Example of checklist case review.

| | **Yes / No** | **Appropriately carried out? Yes / No** |
|---|---|---|
| Seen by obstetrician or midwife if in second or third trimester | | |
| If BP >140/90 mmHg, appropriate action is taken | | |
| If proteinuria, thrombocytopenia, abnormal LFTs, AKI, obstetric syndromes are ruled out/diagnosed | | |
| Urine dip done | | |
| For suspected PE, local guidance | | |

Data collection: ideally completed after discharge for every relevant patient and tracked on a run chart. Requires alert when AMU patients coded as pregnant.

**Appendix 7:** Patient experience survey.

Were all concerns about your baby and pregnancy addressed by staff in a way you could understand?

Yes / No / I had no concerns

Did you feel that you and your baby were safe during your admission?

Yes / No

What were the best things about your care?

What areas of care could be improved?

**Appendix 8:** Staff survey, near end of rotations.

Have you received specific training during this attachment in management of medically ill pregnant and post-partum women?

Yes / No

Do you know where to find a MEOWS chart?

Yes / No

Do you discuss pregnancy in women of child baring potential who have ongoing medical conditions?

Yes / No

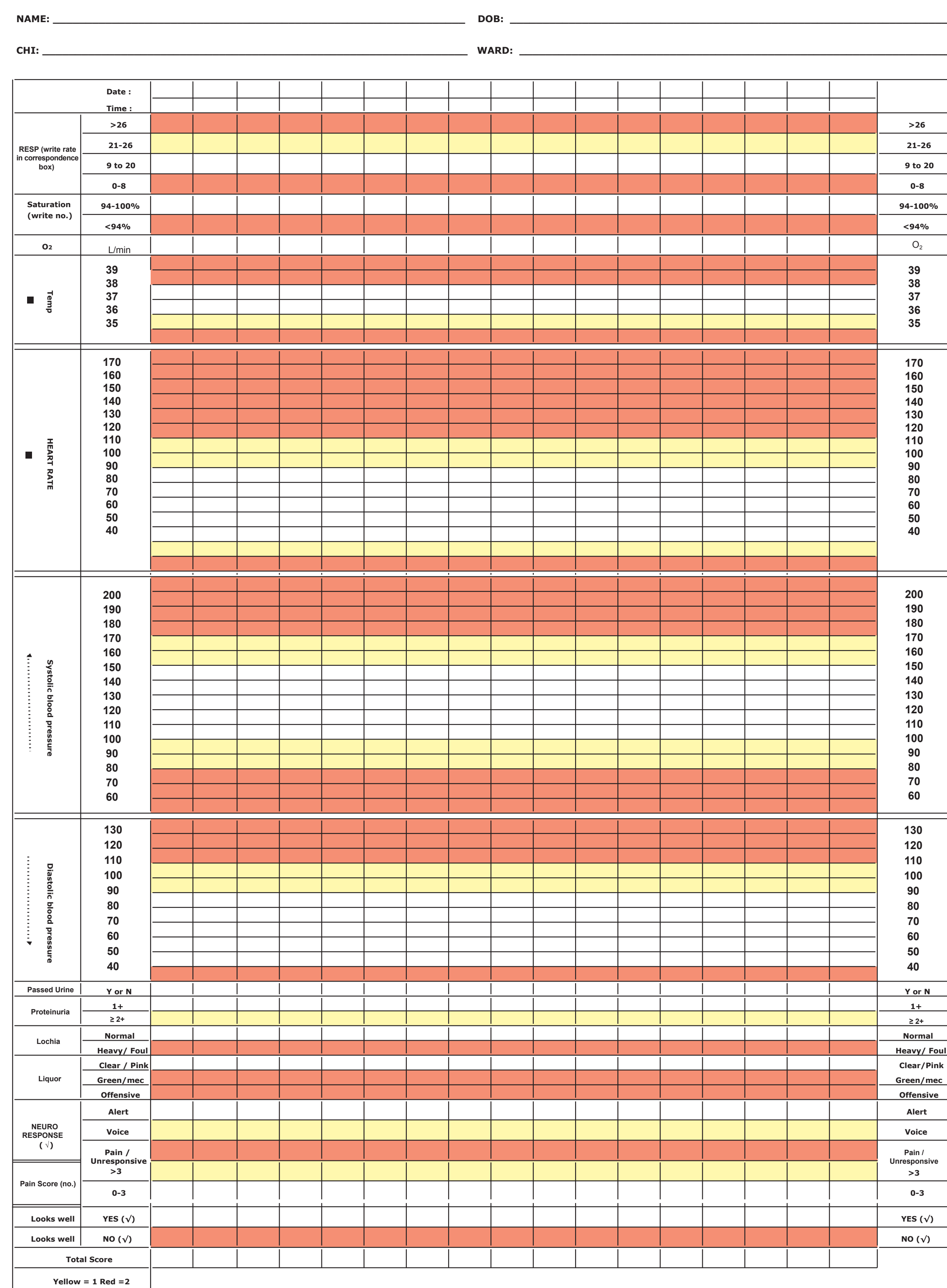
Do you know how and when to contact the obstetric/midwifery team for pregnant women seen with acute medical conditions?

Yes / No

Do you know the policy on investigating breathlessness and suspected PE in pregnant and postpartum women?

Yes / No

**Appendix 9:** Sample MEOWS chart



# Maternity Early Obstetric Warning Signs (MEOWS)

NAME: ______________________ DOB: ______________________

CHI: ______________________ WARD: ______________________

| Parameter | Range | Range (right) |
|---|---|---|
| | Date : | |
| | Time : | |
| RESP (write rate in correspondence box) | >26 | >26 |
| | 21-26 | 21-26 |
| | 9 to 20 | 9 to 20 |
| | 0-8 | 0-8 |
| Saturation (write no.) | 94-100% | 94-100% |
| | <94% | <94% |
| O2 | L/min | O2 |
| ■ Temp | 39 | 39 |
| | 38 | 38 |
| | 37 | 37 |
| | 36 | 36 |
| | 35 | 35 |
| ■ HEART RATE | 170 | 170 |
| | 160 | 160 |
| | 150 | 150 |
| | 140 | 140 |
| | 130 | 130 |
| | 120 | 120 |
| | 110 | 110 |
| | 100 | 100 |
| | 90 | 90 |
| | 80 | 80 |
| | 70 | 70 |
| | 60 | 60 |
| | 50 | 50 |
| | 40 | 40 |
| Systolic blood pressure | 200 | 200 |
| | 190 | 190 |
| | 180 | 180 |
| | 170 | 170 |
| | 160 | 160 |
| | 150 | 150 |
| | 140 | 140 |
| | 130 | 130 |
| | 120 | 120 |
| | 110 | 110 |
| | 100 | 100 |
| | 90 | 90 |
| | 80 | 80 |
| | 70 | 70 |
| | 60 | 60 |
| Diastolic blood pressure | 130 | 130 |
| | 120 | 120 |
| | 110 | 110 |
| | 100 | 100 |
| | 90 | 90 |
| | 80 | 80 |
| | 70 | 70 |
| | 60 | 60 |
| | 50 | 50 |
| | 40 | 40 |
| Passed Urine | Y or N | Y or N |
| Proteinuria | 1+ | 1+ |
| | ≥ 2+ | ≥ 2+ |
| Lochia | Normal | Normal |
| | Heavy/ Foul | Heavy/ Foul |
| Liquor | Clear / Pink | Clear/Pink |
| | Green/mec | Green/mec |
| | Offensive | Offensive |
| NEURO RESPONSE (√) | Alert | Alert |
| | Voice | Voice |
| | Pain / Unresponsive | Pain / Unresponsive |
| Pain Score (no.) | >3 | >3 |
| | 0-3 | 0-3 |
| Looks well | YES (√) | YES (√) |
| Looks well | NO (√) | NO (√) |
| Total Score | | |
| Yellow = 1 Red =2 | | |

**If MEOWS score 2-3 contact doctor and review within 4 hours**

If MEOWS score 4-5 contact doctor and review within 1 hour

**If MEOWS score >5 call obs senior reg 0671 and/or transfer to HDU. Call MET reg on 0610**

## References


1 Mothers and babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK). Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2014–16. MBRRACE-UK, 2018. www.npeu.ox.ac.uk/mbrrace-uk/reports [Accessed 17 September 2019].

2 Royal College of Physicians. *Using the Structured Judgement Review method: Data collection form*. www.rcplondon.ac.uk/projects/outputs/national-mortality-case-record-review-nmcrr-programme-resources [Accessed 3 October 2019].

3 Point of Care Foundation. Experience based co-design: Using patient experience for improvement. www.pointofcarefoundation.org.uk/resource/using-patient-experience-for-improvement/improving-care/experience-based-co-design/ [Accessed 3 October 2019].