Obesity in Pregnancy, Labour and the Puerperium

University Hospitals of Leicester NHS
NHS Trust

Scope:

This guideline applies to all members of staff within the Maternity Unit who provide antenatal and peripartum care for women with obesity.

Legal liability (standard UHL statement):

Guidelines issued and approved by the Trust are considered to represent best practice. Staff may only exceptionally depart from any relevant Trust guidelines providing always that such departure is confined to the specific needs of individual circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible healthcare professional' it is fully appropriate and justifiable - such decision to be fully recorded in the patient's notes.

Related documents:

Procedures for the safer manual handling of the obese patient
Manual handling generic risk assessment 2010 form
Thromboprophylaxis in pregnancy, labour and after vaginal delivery
Diabetes in pregnancy
Booking Process and Risk Assessment in Pregnancy and the Postnatal Period
Caesarean section guideline

Definitions:

Body Mass Index (BMI) is an index of weight-for-height. It is calculated by the weight in Kilograms divided by the square of the height in metres (kg/m^2).

Maternal Obesity is defined by the World Health Organisation (WHO) (2000) as a Body Mass Index (BMI) of ≥30 Kg / m^2 at the first antenatal consultation.

Classification	**BMI kg/m^2**
Normal Range	18.5-24.9
Overweight	25-29.9
Obese Class I	30-34.9
Obese Class II	35-39.9
Obese Class III	≥ 40

Background:

"Saving mothers' lives" (CEMACH 2007) highlighted the risks of maternal death among obese pregnant women in the UK. Potential complications due to obesity in the pregnant woman have implications for mother and baby as well as complicating the labour and birth. Identifying and managing the risks can improve pregnancy outcomes for women with an increased BMI via the implementation of appropriate plans of care.
There are health and safety issues for staff manual handling, and there is a need for suitable equipment (beds, operating tables, patient transfer aids, and lithotomy facility, TED stockings, BP monitors cuffs etc) that will be adequate for women with obesity (see Appendix 1).

Risks associated with maternal obesity (BMI $\geq$ 30 kg/m^2):

Antenatal	Intrapartum	Postpartum	Anaesthetic
Gestational Diabetes	Failed induction	Postpartum Haemorrhage	Difficult airway/ intubations
Hypertension/Pre-Eclampsia	Failure to progress in labour	Thromboembolism	Aspiration
Thromboembolism	Difficulties monitoring fetal heart	Wound complications	Difficult to oxygenate due to increased intra-abdominal pressure
Fetal loss	Higher risk of operative delivery	Sleep apnoea	Difficulty siting regional block, less predictable spread of local anaesthetic
Fetal growth disorders (both growth restriction and macrosomia)	Shoulder dystocia	Admission of baby to Neonatal Unit	Non-invasive BP monitoring unreliable in morbid obesity
Difficult ultrasound diagnosis of fetal problems	Failed VBAC	Still birth	Need for high dependency care postoperatively
Increased risk of fetal neural tube defects	Higher morbidity and mortality with technically difficult Caesarean Section	Neonatal death	

Care for women with obesity

Planning of care for women with obesity in pregnancy is essential. It is important that all women are given respect and treated as an individual; all issues related to pregnancy and obesity need to be discussed with compassion and respect, but must not be neglected due to discomfort on part of the staff involved.
Women should be made aware of the risks associated with a raised BMI and the planned management strategies to minimise these risks.
All aspects of management of care - antenatal, intrapartum and postnatal, should be discussed with the woman early in pregnancy and clearly documented in the maternity hand held records.

1. Pre Conception

Where a woman with a BMI ≥ 30 presents to the service pre-conceptually, information should be provided about risks associated with pregnancy in this circumstance.

- Patients with obesity may present to infertility services seeking advice, or to gynaecology services with early pregnancy complications resulting in fetal loss. This opportunity should be taken to discuss the risks inherent in obesity, and the woman should be advised to defer (a further) pregnancy until a healthier weight has been achieve

- A referral to a dietician should be offered.

- All women should be advised to take pre-conceptual Folic Acid; women with Class III obesity should be advised to take the higher 5 mg dosage.

2. Booking with BMI ≥ 30kg/m^2

2.1 For ALL women booking for antenatal care, measure weight and height, calculate BMI and document in the patient's healthcare record and on Euroking.

2.2 All women with a BMI > 30kg/m^2 at booking should be offered information on the risks associated with obesity and pregnancy. Information should also be provided by an appropriately trained health professional on possible intrapartum complications and this should be documented in the health record. Women should be given the opportunity to discuss this information. Diet and exercise must be discussed and advice documented. See UHL leaflet " High Body Mass Index (BMI) and Pregnancy"

2.3 Women with a BMI ≥ 30-34.9 kg/m^2 can be booked at present for midwifery led care unless other obstetric/medical/anaesthetic risk factors present. Women with a BMI of ≥ 35 kg/m^2 should be advised to deliver in a Consultant led unit.

2.4 If there is uncertainty about the size of cuff required, please measure upper arm at mid-point circumference and use the appropriate size BP cuff (Adult 27-34cm, Large adult 34-43cm and XL 34-43 cm)

2.5 Commence/continue on Folic acid 5mg daily, up to 12 weeks' gestation via GP.

3. Antenatal Care

Women booking with a BMI ≥30kg/m^2

3.1 Offer GTT in the late second or early third trimester (24-28 weeks where possible), unless there is a clinical need for earlier testing.

Women booking with a BMI ≥35 kg/m^2 *In ADDITION TO ABOVE*

3.2 Re-measure weight during pregnancy - there should be a weight recorded in the third trimester where possible. If the weight is above 200kgs the woman should be referred to a Consultant led Antenatal Clinic for a manual handling assessment.

3.3 Offer oral Vitamin D supplementation 10 micrograms daily during pregnancy and breastfeeding via GP.

3.4 Consider Aspirin 75 mg daily in the presence of additional moderate risk factor for pre-eclampsia

3.5 Refer to specialist Consultant Led Clinic if one or more additional risk factors for pre-eclampsia

- First baby.
- >10 years since last baby
- Age >40 years,
- Family history of pre-eclampsia
- Booking diastolic BP >80 mmHg, booking
- Proteinuria > +1 on more than one occasion or > 0.3 g/24 hours
- Multiple pregnancy
- Other underlying conditions such as diabetes, renal disease, pre-existing hypertension

Women booking with a BMI ≥40 kg/m^2 *In ADDITION TO ABOVE*

3.6 Refer to an Obstetrician Led Specialist Clinic 'H&W Clinic' (Health and Wellbeing), unless the patient is already attending another Consultant Led Clinic at LRI or LGH. A discussion should take place regarding any risks in pregnancy, labour and puerperium, and this should be documented in the patient's healthcare record.

3.7 All Primigravidas should be referred for anaesthetic assessment, where an agreed anaesthetic management plan is documented in the patient's notes.

3.8 Multiparous women with a BMI of 40 – 44.9 require anaesthetic assessment if they are planning to have Vaginal Birth after Caesarean Section (VBAC) or for whom the labour or delivery is not anticipated to be straightforward. Multiparous women with a BMI of 45 or more should be referred for an Anaesthetic review in all cases.

3.9 Offer appropriate leaflets e.g. *"healthy eating in pregnancy"*/ the "*Tommy's guide healthy weight during pregnancy booklet"* or highlight the section on eating in pregnancy in the Department of Health "*The pregnancy book*" (pp.8-12)

3.10 Monitor for pre-eclampsia 3 weekly between 24-32 weeks and 2 weekly from 32 weeks to birth

3.11 For women whose weight is less than 200kgs equipment is readily available. All women whose weight is greater than 200kgs should have a documented assessment by an appropriate member of staff or a member of the Manual Handling Team to determine the need for additional equipment or any manual handling requirements in all care settings (see Appendix 1 for equipment availability).

Intrapartum Care

4.1 All women with a BMI ≥35 kg/m^2 should be advised to deliver in a Consultant Led Unit

4.2 Alert theatre staff on admission if weight >120 kg and needs operative delivery; Obstetric and Anaesthetic staff and the Core Midwife should be notified when a woman with Grade II-III obesity (BMI ≥ 35) is admitted in labour or for elective delivery

4.3 For an elective delivery, communication with the personnel working on the day should take place in advance, so that appropriate arrangements can be made to ensure suitable equipment is available, and additional facilities, such as an HDU bed, can be secured where required

4.4 Information of the BMI should be highlighted to all members of staff and documented in the booking system when arranging induction of labour or other elective admission. Any special pre-arranged equipment *(special bed, theatre table, and manual handling equipment)* should also be indicated in the notes. Maternity theatre staff should also be notified.

Women with a BMI ≥40 kg/m^2 *In ADDITION TO ABOVE*

4.5 Senior Obstetric and Anaesthetic staff and Core Midwife should be informed and review this group on admission and during all ward rounds

4.6 Establish early intravenous access

4.7 Consider early epidural

4.8 If a Caesarean Section or Rotational Instrumental Delivery is required it should be performed by an experienced Obstetrician (ST6 or above). There should be a low threshold for performing instrumental deliveries as a 'trial' in theatre, due to the higher failure rate.

4.9 In some women it may be necessary for more than one senior Anaesthetist and senior Obstetrician to attend for operative delivery; under these circumstances it may not be considered appropriate for the woman to undergo an emergency Caesarean

Section until all personnel are present, even if this will have an adverse impact on the fetus. Where this applies, it should be discussed antenatally with the patient and clearly documented in the Intrapartum Care Plan.

4.10 Obesity is a recognised risk factor for failed VBAC. Women with previous Caesarean section requesting VBAC should be discussed with the named lead consultant and their care individualised. Caution should be exercised when considering and induction of labour in these women. Higher risk of failure with attendant increased operative and anaesthetic risks should be discussed with these women

4.11 Recommend active management of the third stage

Postnatal Care

5.1 All women with obesity in pregnancy should have early mobilisation if possible

5.2 Use compression stockings if two or more additional risk factors

5.3 Commence postnatal thromboprophylaxis for seven days if one or more additional risk factors for thromboembolism are present (see Thromboprophylaxis guideline). All women with BMI ≥ 40 should be offered postnatal thromboprophylaxis for seven days regardless of their mode of delivery

5.4 Prior to postnatal discharge from hospital, women with obesity should receive future pregnancy advice. The long term risks of obesity, such as hypertension and diabetes, should be emphasized, and weight loss prior to next pregnancy should be advised

References:

1. Modder J, Fitzsimmons K J. (2010) CMACE /RCOG Joint Guideline Management of Women with Obesity in Pregnancy.
2. Stewart FM, Ramsay JE, Greer IA. (2009). Review Obesity: Impact on Obstetric practice and Outcome. TOG:11; 25-31.
3. Yu CKH, Teoh TG, Robinson S. Obesity in pregnancy. BJOG 2006;113:1117-1125
4. Alexander CI, Liston WA. Operating on the obese woman- a review. BJOG 2006;113:1167-1172
5. NICE clinical guideline No 55: Intrapartum Care for healthy women and their babies. NICE Sept 2007
6. CEMACRCOG joint guideline Management of women with obesity in pregnancy March 2010.
7. Management of the Obese Maternity Woman Guideline, The Royal Women's Hospital, Victoria, Australia http://www.thewomens.org.au/ObeseMaternityWomanManagement (accessed 15 July 2008)

APPENDIX 1

AVAILABLE EQUIPMENT (with maximum weight capacity) FOR BARIATRIC PATIENTS WITHIN WOMENS AND PERINATAL SERVICES

HillRom Electric Profiling Bed 210 kg
The bed is available on all wards. Contact Manual Handling Service or Duty Manager for patients over 210kg

Orange XXL chairs seat width 70cm 254 kg
Available at LRI on Ward 1, 5 or 6
Wheels on the rear legs to move unoccupied chair

Green XL chairs seat width 60cm 254 kg
Available at LGH on Ward 30, 31 and ANC
Wheels on the rear legs to move unoccupied chair

PAT slide (over a 15cm gap) 200 kg

Delivery Suite theatre table 300 kg

Liko Viking M hoist with scales 200 kg
Available on Ward 30 LGH and Ward 1 LRI

XL and XXL hoist sling. Contact Manual Handling Service who are usually available during office hours. This is difficult out of hours because if we leave it with the hoist it may be used for another patient

Step on scales
Available in Pregnancy Assessment Service LGH and Antenatal Clinic LRI 250 kg

XXL gowns available from Linen Rooms

Monitoring	
Process for monitoring:	Retrospective audit of health records
How often will monitoring take place:	Quarterly
Population:	• 0.5% of all health records of women who have delivered • 4 sets of health records of women who have delivered who required an antenatal consultation with an Anaesthetist • 4 sets of health records of women who have delivered who required an antenatal consultation with an Obstetric Consultant • 4 sets of health records of women who have delivered who required an individual documented assessment in the third trimester of pregnancy
Person responsible for monitoring:	Senior Midwife for Antenatal and Community Services Consultant Midwife for Public Health
Auditable standards:	• The BMI has been calculated and documented in the health records • The BMI has been recorded on the electronic patient information system • All women with a BMI $\geq$ 35 should be advised to delivery in an obstetric led unit • All women with a BMI ≥ 40 have been offered an antenatal consultation with an Obstetric Anaesthetist • There is a record of an Obstetric Anaesthetic management plan for labour and delivery in the health record A • Women with a BMI $\geq$ 40 have manual handling and tissue viability issues assessed by an appropriately trained professional in the third trimester of pregnancy and an individualised plan is documented in the health care record • There has been assessment of the availability of suitable equipment for women whose weight is greater than 200kgs. This will be reviewed annually.
Results reported to:	Maternity Services Governance Group
Person responsible for producing action plan:	Senior Midwife for Antenatal and Community Services Consultant Midwife
Action plan to be signed off by:	Maternity Services Governance Group
Action plan to be monitored by:	Maternity Services Governance Group
How will learning take place: in one or more of the following fora	Audit meetings Delivery suite forum Intrapartum meetings Team meetings