WOMEN'S HEALTH AND PAEDIATRICS
MATERNITY UNIT

MATERNAL OBESITY GUIDELINES

Amendments			
Date	Page(s)	Comments	Approved by
April 2011		Monitoring section updated and reviewed in line with RCOG guidelines	Women's Health Guidelines Group

Compiled by: Theresa Spink (Clinical manager antenatal and community services)
Mr Arash Bahmaie (Consultant Obstetrician and Gynaecologist)

In Consultation with: Consultants Obstetrics & Gynaecology, Obstetric Anaesthetic Consultants
Women's Health Guidelines Group

Ratified by: Women's Health Guidelines Group

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Target Audience: Women & Staff working in the Maternity Services

Impact Assessment Carried Out By: Women's Health Guidelines Group

Comments on this document to: Arash Bahamie

OBESITY IN PREGNANCY GUIDELINES

Introduction & purpose

This guideline covers the management of maternal obesity within Ashford & St. Peters Maternity services including antenatal, intrapartum and postnatal care management. It should be read in conjunction with the guidelines below as appropriate and the care pathway at the end of this guideline.

Trust Bariatric Policy and Guidelines
Trust Manual Handling Policy
Diabetes Guidelines
Care of Women in Labour (including clinical risk assessment)
Referral to Maternity Services, Booking Appointments and Maternity Care Pathway including missed Appointments
Booking appointments Clinical Risk Assessment
Homebirth guideline

Definition

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)

Obesity is defined by the World Health Organization (WHO) (1998) and the National Institutes of Health (1998) as a Body Mass Index (BMI) of ≥ ≥30kg/ m^2).

Overweight	25.0 - 29.9
Obesity Class I	30.0 - 34.9
Obesity Class II	35.0 - 39.9
Obesity Class III	40+

Why does obesity in pregnancy matter
There is substantial evidence that obesity in pregnancy contributes to increased morbidity and mortality for both mother and baby. For example, the CEMACE Maternal Death Enquiry found that approximately 27% of women who died in the 2006-2008 triennia were obese (CEMACE, 2011).
Increased rates of obesity related morbidity and mortality are reflected in increased social and financial costs:

- Obese women spend an average of 4.83 more days in hospital and the increased levels of complications in pregnancy and interventions in labour represent a 5 fold increase in cost of maternal care(Galtier-Dereure et al, 2000)
- Costs associated with newborns are also increased, babies born to obese mothers have a 3.5 fold increase in admission to Neonatal Intensive Care Unit (NICU)

Antenatal Care
At the booking appointment **ALL** women should have their weight and height measured, not estimated, and the BMI calculated and documented in the pregnancy records/pregnancy and birth records. The midwife should follow the increased BMI pathway (see below) for any woman with a BMI ≥ $30kg/m^2$. The midwife should then discuss with the woman potential difficulties that may be encountered during her pregnancy because of her raised BMI and make a referral to the obstetric consultant clinic. Women with a BMI of 30 or greater should be advised to book for **maternity team based care**. The midwife must also measure the woman's upper arm circumference and document this in her notes. A woman with a circumference of more than 35cm should have her BP taken with a large cuff.

If the woman reports any form of diabetes, impaired glucose tolerance (even if well controlled with diet) she must be immediately referred to the diabetes specialist midwife.

In women with a raised BMI the following should be considered.

- Advice given on diet: Women with high BMI should be re-weighed after 36 weeks.
- Exercise: Obese women should be encouraged to undertake regular gentle exercise. Exercise maintains a good cardio-respiratory capacity. Obese women who exercise during their pregnancy develop gestational diabetes less frequently than those women who do not exercise.

Gestational diabetes
Obese women are at risk of developing gestational diabetes. With a BMI ≥ 30kg/m^2 screening for gestational diabetes must be arranged by contacting the ANC and arranging a glucose tolerance test (GTT) at around 26- 28 weeks. The GTT result is followed up by the diabetic specialist team and where the GTT is positive ongoing management will oversee them.

Where the GTT is normal the woman's ongoing antenatal care will follow the normal antenatal schedule. However, further screening may be required if there is glycosuria or other risk factors identified during the course of the woman's antenatal care (refer to Antenatal guidelines for the care of women with gestational diabetes).

Venous thromboembolism (VTE)
Pregnancy has a ten fold increased risk of venous thromboembolism. This risk becomes greater in the presence of obesity or other factors such as age > 35 years, parity >4, surgical obstetric procedures, hyperemesis, and pre-eclampsia. A combination of any of these factors further increases the risk in an obese woman. Antenatal thromboprophylaxis may therefore be considered. Where risk factors are identified a referral should be made to the consultant obstetrician (refer to the Guidance for the risk assessment and management of VTE).

Hypertensive disorders of pregnancy
There is an increased risk of pre-eclampsia and eclampsia amongst obese women. Regular monitoring of blood pressure and urine for protein is required. Referral for the consultant care will be as per Referral to Maternity Services, Booking Appointments and Maternity Care Pathway including Non attendance of Antenatal Appointments

Clinical risk assessment (antenatal) guideline. Obese women must be offered an antenatal care schedule of review every four weeks, then every two weeks after 34 weeks gestation.

Potential anaesthetic problems
All women with a BMI of 40kg/m^2 or more should be referred to a consultant anaesthetist at around 28 weeks gestation or earlier if an inpatient with a significant problem.

Women with a BMI >35kg/m^2 but less than 40 do not require antenatal review unless they have significant co morbidity.

Special equipment
In preparation for delivery and admission to hospital, it is essential that chairs, beds and operating tables are of adequate capacity are available.

Ashford and St Peter's Hospitals has the following equipment routinely available in the antenatal clinic, ultrasound department, Joan Booker ward or labour ward:

- Examination couch 225kg capacity
- Bariatric couch 325 kg capacity
- Ultra sound couch 241 kg capacity
- Wheelchair/chair 380kg capacity
- Ward bed 180 kg capacity
- Toilets 114 kg capacity (extra- large commodes to go over the toilet are available)

- Delivery bed 180 kg capacity
- Operating table 248kg capacity (main theatres has a 450 kg table)
- Hoist/gantry- Contact minimal handling who will supply as required ex 3664

Specific arrangements for equipment will only be required for women whose body mass exceed the load capacity of the bariatric equipment already available in the Maternity Unit.

Other equipment is available see Bariatric patient policy on the trust intranet

Planning antenatal care
At the booking appointment the midwife must plan the woman's antenatal care following the increased BMI pathway described above. Women with a BMI of 35 or more have increased risk and should plan for birth in an obstetric unit (NICE, 2007)

Intrapartum
The pathway must continue to be followed.

Venous access should be secured early. Because of the difficulty that may be encountered with cannulation, it is better to undertake this procedure early, rather than during an emergency.

Early placement of an epidural catheter is recommended for obese women in labour. This is safer and easier than inserting the catheter in emergency conditions.

Indications for induction of labour and caesarean sections must be discussed with a senior obstetrician. If a woman whose BMI is 35 or over chooses to have a homebirth then the Supervisor of midwives must be informed (refer to the Homebirth guideline). Transfer into the Obstetric Unit must be considered and global Solutions Limited has an ambulance capable of transporting women up to 178 kg/28 stone. Ideally the ambulance service requires at least 5 days notice in order to undertake a risk assessment and exit strategy. Thames ambulance Service Ltd. has one new bariatric ambulance which is capable of transferring women up to 318kg/50stone. Contact these services is via the hospital switchboard.

Anaesthetic assessment should occur early in labour unless it has already been undertaken during the pregnancy.

Women should be encouraged to be as mobile as possible during labour.

If caesarean section is required follow the associated guideline

Postpartum care
Refer to relevant guidelines appropriate to the woman's individual needs.

All obese women who have undergone obstetric procedures involving 30 or more minutes in lithotomy position or a caesarean section should be prescribed LMWH according to the VTE pathway.

Postpartum assessment of obese women by obstetricians and midwives for the development of psychological disorders is advised. Obesity and the postpartum periods are independent risk factors for the development of psychological disorders.

Care management pathway for women with raised BMI 30 and over

Booking appointment at 8-10 weeks.

- Routine booking plus bloods
- Refer to Obstetric Consultant
- Arrange G.T.T test for 26- 28 weeks
- Measure Height, weight and document with BMI
- Measure arm circumference, document in hand held notes. If greater than 35 cm use large B.P. cuff.
- Consider other morbidity factors

At booking appointment briefly discuss:-

- Hypertension and pre-eclampsia
- Gestational diabetes
- Venous Thrombosis
- Depression
- Advise on moderate exercise and healthy eating
- **If BMI ≥30 advise team based care-refer to consultant clinic**
- An antenatal discussion of possible intrapartum complications associated with raised BMI should be documented.
- **If BMI ≥35 advise Obstetric led care for pregnancy & delivery – refer to consultant clinic**
- An antenatal discussion of possible intrapartum complications associated with raised BMI should be documented.

For women with a BMI ≥ 40 or greater the following should be arranged and conducted

- Referral for anaesthetic review to be made around the 28 week appointment.
- A third trimester individual assessment to determine manual handling requirements and consider tissue viability issues by an appropriately trained professional
- Refer to Trust Bariatric patient policy to arrange equipment if required

If a woman with a BMI ≥30 or more is admitted in the antenatal period the following management is required in addition to the management of her presenting problem.

- Should wear anti embolic stockings
- Need for antenatal low molecular weight heparin must be discussed with the responsible Consultant. Remember if on low molecular weight heparin, spinal/epidural anaesthesia cannot be sited until it is more than 12 hours since the last injection.
- If urinalysis shows plus or more of glucose refer to the guideline for screening for gestational diabetes.
- If caesarean section is planned/possible and the woman has not had an anaesthetic review this should be arranged with the labour ward anaesthetist. Do not leave this until an emergency caesarean section is required.

When admitted in labour normal labour management is usual but ensure that the following is considered

- Inform the labour ward anaesthetist of admission; discuss the requirement of anaesthetic review unless the woman has already had an antenatal anaesthetic review.
- Wear anti embolic stockings in labour
- Secure I.V. Access early. If venous access appears difficult, ask the anaesthetist to cannulate. Sonosite is available in the trust if required (call site co-ordinator)
- During cannulation, take bloods for Group and Save and Full blood Count. Flush cannula with 5ml N/Saline.
- Order any Bariatric equipment needed.
- Eating and drinking in labour will be as per the intra partum care guidelines. 'Women may eat a light diet in established labour unless they have received opioids or they have or develop risk factors that make a general anaesthetic more likely' NICE, 2007.
- If the woman's risk factors change during labour review eating and drinking in consultation with the obstetric team and the anaesthetic team.
- Give oral Ranitidine 150mg 6 hourly and oral metoclopramide 10mg eight hourly, if nil by mouth for over six hours I.V fluids must be prescribed.
- If C.T.G monitoring is needed, may require fetal scalp electrode for adequate monitoring.
- If epidural requested/advised, early insertion is preferable. Liaise with the labour ward anaesthetist
- Be prepared for possibility of shoulder dystocia.
- Remember the use of the pool in labour is not advised.

If caesarean section required

- If the woman has not already had an anaesthetic review, this must be arranged as soon as possible.
- Regional anaesthesia is preferred but G.A may be required.

Labour ward anaesthetist must discuss management with a consultant anaesthetist.
Time of caesarean section or type of anaesthesia may be determined by time of last antenatal low molecular weight heparin injection.
Ideally perform caesarean section after six hours starvation.
Ensure premed (150mg oral ranitidine and 10mg Oral Metochlopramide) has been given within the last eight hours.
Labour ward or O/C consultant obstetrician must be aware of the woman's high BMI. If the BMI is greater than or equal to 40kg/m2 the consultant will need to be present for the operation, unless the registrar is (ST7+ or equivalent).
Routine surgical technique for caesarean section with extra fat sutures. Consider interrupted sutures for skin.

Post natal considerations

For Vaginal Delivery- no lithotomy

- Normal postnatal care
- Early mobilisation
- Anti embolic stockings

For vaginal delivery with lithotomy less than 30 minutes,

- As S.V.D no lithotomy

For vaginal delivery with lithotomy longer than 30 minutes or caesarean section.

- Normal postnatal care
- Early mobilisation
- If the woman remains in bed for prolonged periods, refer to trust policy on pressure area care
- T.E.D.S
- Anticoagulation, If B.M.I over 40.0kg/m2 ensure doctor prescribes enoxaparin as per VTE guidance
- Remember women with High B.M.I's will need extra help with breast feeding

Monitoring

Compliance with this guideline will be monitored 3 yearly by review of maternity records as detailed in the table below. Where deficiencies are identified action plans will be developed and changes implemented and disseminated as required.

Element to be monitored	Lead	Tool	Frequency	Reporting arrangement	Acting on recommendations and Lead(s)	Change in practice and lessons to be shared
a. calculation and documentation of body mass index (BMI) in the health records b. calculation and documentation of the BMI in the electronic patient information system c. requirement that all women with a BMI >30 should be advised to book for maternity team based care d. requirement that all women with a BMI >35 should be advised to deliver in an obstetric led unit e. requirement that all women with a BMI >40 have an antenatal consultation with an obstetric anaesthetist f. requirement that a documented obstetric anaesthetic management plan for labour and delivery should be discussed with all women with a BMI >40 g. requirement that all women with a BMI >30 have a documented antenatal consultation with an appropriately trained professional to discuss possible intrapartum complications i. requirement that all women with a BMI >40 have an individual documented assessment in the third trimester of pregnancy by an appropriately trained professional to determine manual handling requirements for childbirth and consider tissue viability issues. requirement to assess the availability of suitable equipment in all care settings for women with a high BMI	Alison Couzens and Arash Bahmaie	Audit tool Attached in appendix 1% all records of all deliveries 1% or 10 women who require antenatal anaesthetic review. 1% deliveries who have an antenatal consultation with an appropriately trained professional. 1% or 10 women who have a third trimester individual documented assessment. RAT tool	3 yearly 1yr-18 months	Perinatal audit meeting or Quality and safety half day HOM	Clinical manager antenatal services, diabetic specialist and Consultant diabetic specialist as appropriate. HOM	Communication bulletin Quality and safety half days. Communication bulletin staff meetings any other meeting as appropriate One or any of the above as appropriate.

References

Galtier-Dereure F, Boegner C, Bringer J (2000) Obesity and pregnancy: complications and cost. *Am J Clin Nutr* 71(5): 1242S-8S

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Nelson-Piercy C (2004) Thromboprophylaxis during pregnancy, labour and after vaginal delivery. RCOG Guideline No.37. *Royal College of Obstetricians and Gynaecologists*. London, RCOG Press.

Saravanakumar K, Rao SG, Cooper GM. Obesity and obstetric anaesthesia. Anaesthesia. 2006 Jan;61(1):36-48.

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NICE, 2007 Intrapartum Care.

Centre for Maternal and Child Enquiries, Royal College of Obstetricians and Gynaecologists (2010). *Management of Women with Obesity In Pregnancy.* London: CEMACE/RCOG. Available at: http:///www.rcog.org.uk

Obesity – Audit Tool

A

At Booking Appointment:

Documentation that the woman has been weighed (not estimated)

☐ Yes ☐ No

Recorded weight: ☐☐☐ kg

Documentation that the woman has been measure (not estimated)

☐ Yes ☐ No

Recorded height: ☐.☐ m

Recorded BMI: ☐☐ Kg/m^2

C

If BMI ≥30, was the woman advised to book for maternity team based care?

☐ Yes ☐ No

D

If BMI ≥ 35 is it documented that the woman was advised to deliver in hospital?

☐ ☐

G

If BMI ≥ 30, is an antenatal consultation with an appropriately trained professional to discuss possible intrapartum complications documented?

☐ Yes ☐ No

F

If BMI ≥40, did the woman have a consultation with an obstetric anaesthetist and is a discussion with the woman regarding an anaesthetic management plan for labour and delivery documented?

☐ Yes ☐ No

I

If BMI ≥40, did the woman have an individual documented assessment with an appropriately trained professional in the third trimester of pregnancy to determine manual handling requirements and consider tissue viability issues?

☐ Yes ☐ No

EQUALITY IMPACT ASSESSMENT TOOL

Name: Obesity Guideline
Policy/Service: Maternity Services

Background • Description of the aims of the policy • Context in which the policy operates • Who was involved in the Equality Impact Assessment
This guideline covers the management of maternal obesity within Ashford & St. Peters Maternity services including antenatal, intrapartum and postnatal care management.
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
The policy affects women using the maternity services who are categorised as obese. The policy takes account of a woman's individual needs during pregnancy, labour and postpartum periods and aims to ensure they are not disadvantaged by guiding staff to account for their individual needs as well as enabling them to access appropriate advice and equipment to support care management.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
This policy addresses any potential impact for pregnant women who are obese
Conclusion • Provide a summary of the overall conclusions
Impact addressed
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
This assessment will be reviewed where national guidance is issued and 3 yearly otherwise

Guidance on Equalities Groups

Race and Ethnic origin (includes gypsies and travellers) (consider communication, access to information on services and employment, and ease of access to services and employment)	**Religion or belief** (include dress, individual care needs, family relationships, dietary requirements and spiritual needs for consideration)
Disability (consider communication issues, access to employment and services, whether individual care needs are being met and whether the policy promotes the involvement of disabled people)	**Sexual orientation including lesbian, gay and bisexual people** (consider whether the policy/service promotes a culture of openness and takes account of individual needs
Gender (consider care needs and employment issues, identify and remove or justify terms which are gender specific)	**Age** (consider any barriers to accessing services or employment, identify and remove or justify terms which could be ageist, for example, using titles of senior or junior)
Culture (consider dietary requirements, family relationships and individual care needs)	**Social class** (consider ability to access services and information, for example, is information provided in plain English?)

If further assessment is required please see the Integrated Single Equality Scheme.

For advice in respect of answering the above questions, please contact HR Manager, on extension 2552.

PROFORMA FOR RATIFICATION OF POLICIES AND GUIDELINES BY RATIFYING COMMITTEE

Policy/Guidelines Name:	Maternal Obesity Guideline
Name of Person completing form:	Jacqui Rees
Date:	April 2011

Author(s)	Sandra Newbold, Jacqui Rees
Name of author or sponsor to attend ratifying committee when policy/guideline is discussed	Jacqui Rees
Date of final draft	April 2011
Has this policy/guideline been thoroughly proof-read to check for errors in spelling, typing, grammar and consistency?	Yes
By whom:	Maternity Guidelines Group
Is this a new or revised policy/guideline?	New

Describe the development process used to generate this policy/guideline.
Obesity discussed each month at Maternity matters facilitator meetings. Consultant Obstetrician and midwife Author attended C.E.M.A.C.H Obesity in pregnancy conference. Author attended research into addiction and obesity conference. Maternity guideline group. Discussed with Midwife specialists
Who is the policy/guideline primarily for?
Pregnant women with BMI over 30
Is this policy/guideline relevant across the Trust or in limited areas?
Limited to Maternity Services
How will the information be disseminated and how will you ensure that relevant staff are aware of this policy/guideline?
E Mail, maternity unit meeting, newsletters, notice boards, intranet
Describe the process by which adherence to this policy/guideline will be monitored.
Audit
Is there a NICE or other national guideline relevant to this topic? If so, which one and how does it relate to this policy/guideline?
See references
What (other) information sources have been used to produce this policy/guideline?
A comprehensive current literature review
Has the policy/guideline been impact assessed with regard to disability, race, gender, age, religion, sexual orientation?
Yes
Other than the authors, which other groups or individuals have been given a draft for comment?
Maternity staff including obstetricians, anaesthetists, trust manual handling co-ordinators. Supervisors of Midwives
Which groups or individuals submitted written or verbal comments on earlier drafts?
Women's Health Guideline Group,
Who considered those comments and to what extent have they been incorporated into the final draft?
Consultant Obstetrician, Inpatient and outpatient managers, clinical governance and risk manager, midwife specialists all contributed comments which were considered and incorporated in the final draft
Have financial implications been considered?
Yes