## OBESITY IN PREGNANCY

<table>
<thead>
<tr>
<th>Version:</th>
<th>1.2</th>
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<tbody>
<tr>
<td>Ratified by:</td>
<td>Maternity Quality Board</td>
</tr>
<tr>
<td>Date ratified:</td>
<td>17th January 2013</td>
</tr>
<tr>
<td>Approving Committee/Group (Date)</td>
<td>Maternity Guidelines and Practice Review Committee 14/1/13</td>
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<td>Date Approved by Medicines Management Committee:</td>
<td>MMC 12/06/2012, Chairs actions 17/10/2012</td>
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<tr>
<td>Name and Title of originator/author:</td>
<td>Miss Bini Ajay Consultant Obstetrician, Pearl Simpson – Supervisor of Midwives</td>
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<td>Date issued:</td>
<td>January 2013</td>
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<td>Review due date:</td>
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<tr>
<td>Target audience:</td>
<td>All Maternity Staff</td>
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<tr>
<td>Superseded documents</td>
<td>V1.1</td>
</tr>
<tr>
<td>Relevant Standards(e.g. NHSLA, CQC, HSE)</td>
<td>NHSLA CNST Maternity Standard 3 Criterion 10</td>
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<td>None</td>
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<tr>
<td>Key Words</td>
<td>Raised BMI, Maternal and Fetal Risks</td>
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1 INTRODUCTION

The increasing prevalence of obesity in the United Kingdom has been widely publicised and the risks of maternal death among pregnant obese women has been highlighted in *Saving Mothers’ Lives* (CEMACH 2007). *Saving Mothers’ Lives* (CMACE 2011) identified that when considering obesity alone, that is a BMI of 30 or more, 30% of mothers who died from direct causes were obese, as were 24% of women who died from indirect causes. The complications of obesity during pregnancy have far reaching implications for both mother and newborn. Obesity in pregnancy is associated with an increased risk of miscarriage, fetal congenital anomaly, thromboembolism, gestational diabetes, pre-eclampsia, dysfunctional labour, postpartum haemorrhage, wound infections, stillbirth and neonatal death. There is also a higher caesarean section rate in this group of women. Maternity services must develop and implement robust processes to manage the risks associated with obesity and consistently provide sensitive, comprehensive and appropriate multidisciplinary care.

2 PURPOSE & SCOPE

This guideline is intended as a framework for the assessment and risk management of pregnant or recently delivered women with a significantly raised Body Mass Index (BMI) ≥30kg/m². Guidance in relation to specialist equipment is provided to enable the safe delivery of care to this group of women.

Consideration must be given to the practicalities of caring for extremely heavy women within the maternity setting. Issues around clinical procedures, safe moving and handling and the use of specialised bariatric equipment require careful planning in order to minimise the risk to staff and the woman herself.

Women with high BMI needs multidisciplinary input from consultant obstetrician, consultant anaesthetist, dietician, consultant neonatologist and lead midwife for obesity.

3 DEFINITIONS

The BMI is the most commonly used measure to classify obesity. It assesses weight in relation to height and is defined as weight in kilograms divided by the square of height in square metres. Adults with a BMI ≥30kg/m² are classified as obese. The table below shows the classification used by the Institute of Medicine, World Health Organisation and National Institute of Health and Clinical Excellence (NICE).

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI (kg/m²)</th>
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<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
</tr>
<tr>
<td>Normal Range</td>
<td>18.5-24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25.0 -29.9</td>
</tr>
<tr>
<td>Obese Class I</td>
<td>30.0 -34.9</td>
</tr>
<tr>
<td>Obese Class II</td>
<td>35.0 -39.9</td>
</tr>
<tr>
<td>Obese Class III (Morbid Obesity)</td>
<td>≥ 40</td>
</tr>
</tbody>
</table>
For the purpose of this guideline the woman’s absolute weight and size also needs to be considered as these parameters can have implications for certain clinical procedures and the need for specialist equipment.

4 ACCOUNTABILITIES AND RESPONSIBILITIES

Chief Executive
Has ultimate responsibility for the implementation and monitoring of the policies in use in the Trust

Clinical Leads/Head of Midwifery
Have responsibility to ensure that the requirements of this guideline are followed and that this is audited and monitored through the Maternity Quality Board

Clinical Midwifery Managers/Practice Development Midwives.
Have responsibility for ensuring that staff are aware of the requirements of this guideline and that they disseminate any changes in practice and amendments to this guideline to relevant staff groups

Practice Review and Guidelines Group
The group are responsible for the consultation and approval process required during the development of guidelines for the Maternity Unit.

The Maternity Quality Board
The Maternity Quality Board is responsible for the ratification of guideline prior to implementation. This ratification process will take place following the consultation and approval process.

All Staff
It is incumbent on relevant staff when asked, to provide comments and feedback on the content and practicality of the guideline.

5 MATERNAL AND FETAL RISKS

It is recognised that maternal and fetal risks increase as BMI rises. Pregnant women with a BMI $\geq 30\text{kg/m}^2$ have a significantly increased risk of thromboembolism, hypertension, cardiac problems, pre-eclampsia, and gestational diabetes. They also have increased risks of anaesthetic and postoperative complications, sleep apnoea and postpartum haemorrhage. Increased risks to the fetus associated with maternal obesity include stillbirth, neonatal death and shoulder dystocia. There is also a much higher caesarean section rate in this group of women.

Obesity significantly increases the incidence of the following pregnancy related complications:

- Infertility
- Miscarriage
- Fetal birth defects, especially neural tube defect
- Implantation disorders
- Urinary tract infection
- Gestational diabetes
- Type 2 diabetes
- Hypertension, pre-eclampsia and eclampsia
6 RISK ASSESSMENT

The assessment of risk should be made with the pregnant woman every time she makes contact with a health professional during her pregnancy.

6.1 Booking Appointment

The woman’s height and weight must be recorded at booking and her BMI calculated as part of the full antenatal risk assessment. This must be recorded in the hand held notes and entered on the PROTOS database.

All women should have their height and weight measured by the health professional carrying out the booking visit, rather than using self-reported measurements. Height, weight and calculated BMI should be recorded. A BMI ≥30kg/m² must be highlighted (NICE 2008).

All women with high BMI should be reweighed at 36 weeks which is required to calculate some drug dosages.

The decision about the regular monitoring of maternal weight should be based on BMI and confined to circumstances where the clinical management is likely to be influenced.

6.2 Calculating the Body Mass Index

BMI defines the weight (kg) divided by the square of the height (m²). The BMI is calculated using the booking weight and height of the woman. The normal BMI is between 18 and 29.9kg/m².

\[
BMI = \frac{\text{Weight (kg)}}{\text{Height (m²)}}
\]

e.g. if the woman weighs 58.5 kg and is 162 cm tall, BMI = \(\frac{58.5}{(1.62 \times 1.62)} = 22.3\)

6.3 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, increased parity, surgical obstetric procedures, hyperemesis, and pre-eclampsia. A combination of any of these factors further increases the risk in an obese woman. Thromboprophylaxis must therefore be considered. Following Risk assessment, where risk factors are identified a referral should be made to the consultant obstetrician.
All women with a BMI > 40 women should be prescribed LMWH, unless contraindicated by the Senior obstetrician following referral at booking to the Antenatal clinic.

Venous Thromboembolism Maternity Guideline

7 MANAGEMENT OF WOMEN WITH A BMI ≥ 30KG/M²

A detailed history should be taken of any significant pre-existing and past medical conditions e.g. diabetes, raised blood pressure, cardiac problems, sleep apnoea, deep vein thrombosis, pulmonary embolism and thrombophilia.

Women with a BMI ≥ 30kg/m² should have a Glucose Tolerance Test (GTT), at 28 weeks gestation. For management of women found to have gestational diabetes, please refer to Maternity Guideline – Gestational Diabetes.

Forward planning for obese women is essential. Many women are sensitive about their weight and it is important they are treated with respect and encouraged to engage with the services and support offered. However, it is important that clinicians do not allow over-sensitivity to the subject of obesity prevent appropriate management.

Women with a BMI ≥30 women should be made aware of the risks and possible intrapartum complications 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 and clearly documented in the antenatal records.

7.1 Obstetric Referral

All women with a BMI ≥30kg/m² should be referred to consultant-led care at 20 weeks gestation so that an explicit plan of care for the management of the pregnancy can be put in place (CEMACH 2007) to ensure effective team based care.

A follow up appointment to discuss the plan for delivery should be arranged for 36 weeks gestation following an ultrasound scan for estimated fetal weight and presentation at 36 weeks gestation. Serial growth scan will be provided at 28 and 36 weeks routinely.

The Obstetrician should discuss the possible intrapartum complications with the woman and document the discussion in the pregnancy notes with all women with a BMI ≥30kg/m².

7.2 Dietetic Referral

All women with a BMI ≥30kg/m² at booking should be informed of and encouraged to attend the combined midwifery and dietetic healthy eating and nutrition drop-in sessions. These sessions run at various dates and times. More information can be obtained from the dietetic department on 0208 401 3096, or by emailing diatetic.department@croydonhealth.nhs.uk. Those with a BMI ≥35kg/m² should be referred to the dietetic department. See Appendix C for dietetic referral form. Copies are also available from the community midwives’ office.
8. MANAGEMENT OF WOMEN WITH A BMI ≥35KG/M²

8.1 Place of Birth

Women with a BMI ≥35kg/m² are unsuitable for midwifery led care. These women should be advised to deliver in the labour ward rather than at home or in the Birth Centre. (NICE 2008, CEMACH 2007).

9 MANAGEMENT OF WOMEN WITH A BMI ≥40KG/M²

Anaesthetic Referral

In addition to the requirements detailed above, all women with a BMI of 40kg/m² or above should be referred to a consultant anaesthetist clinic. The referral should be made at booking if the BMI is found to be ≥40kg/m² (See Appendix D for anaesthetic referral form. Copies are also kept in the community midwives office)

The obstetric anaesthetist is responsible for developing a management plan for labour and delivery for women with a BMI ≥40, which should be discussed with the woman and documented in the pregnancy notes.

10 ANTENATAL CARE

Following review at the Consultant Obstetric Clinic Women with a BMI ≥30kg/m² may require increased antenatal surveillance. The antenatal care schedule will reflect the risk status of the woman.

When monitoring the blood pressure an appropriately sized cuff must be used.

If any new problems arise during pregnancy e.g. diabetes or hypertension, the woman should be referred immediately to the appropriate consultant.

Weight reduction (dieting) in pregnancy is not currently advised. However neither is pregnancy a time to overeat. The woman should be offered advice on a healthy well balanced diet for pregnancy. Obesity may be associated with malnutrition from essential nutrient deficiency. Additional advice can be given according to weight changes during the course of the pregnancy. This information and support is provided at the drop in sessions described earlier.

The table below shows the recommended pregnancy weight gain suggested by the Institute of Medicine.

<table>
<thead>
<tr>
<th>Weight Category</th>
<th>BMI (kg/m²)</th>
<th>Recommended Pregnancy Weight Gain (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt;19.8</td>
<td>12.5 – 18.0kg</td>
</tr>
<tr>
<td>Normal weight</td>
<td>19.8 - 26.0</td>
<td>11.5 – 16.0 kg</td>
</tr>
<tr>
<td>Overweight</td>
<td>26.1 - 29.9</td>
<td>7.0 – 11.5 kg</td>
</tr>
<tr>
<td>Obese</td>
<td>&gt;29.9</td>
<td>At least 6.0kg</td>
</tr>
</tbody>
</table>

Fundal height measurements may not be as reliable a means of estimating fetal growth. For this reason, an additional ultrasound scan should be carried out at 28 and 36 weeks gestation for presentation, fetal growth and estimated fetal weight. Whilst ultrasound estimations are also
more unreliable in obese women, the combination of clinical estimation and ultrasound scanning, provides a more comprehensive assessment.

10.1 Manual Handling, Equipment & Tissue Viability Assessment

All women with a BMI >40 must have an individual assessment in the third trimester of pregnancy to determine manual handling requirements for childbirth and consider tissue viability issues. This assessment will be carried out by the Midwife at the Antenatal clinic when the woman attends for her 36 week appointment. This assessment should be documented in the pregnancy notes. A copy is sent to the Labour ward lead (stored in a folder on Labour ward) to ensure equipment is in place to meet the woman’s special requirements when she is admitted for birth.

When booking Induction of labour or elective caesarean section, the area she is to be admitted to should be informed if the woman has a raised BMI so that the weight-bearing capacity of equipment, wheelchairs, hoists, etc can be checked and specialist equipment arranged as appropriate.

10.2 Maternity Equipment

An annual equipment audit is carried out by the Lead Midwife for Obesity to assess the availability of suitable equipment in all care settings for women with a raised BMI.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Safe Working Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery Suite Bed</td>
<td>178kg</td>
</tr>
<tr>
<td>Ward Bed</td>
<td>250kg</td>
</tr>
<tr>
<td>Theatre 1 Table</td>
<td>300kg</td>
</tr>
<tr>
<td>Theatre 2 Table</td>
<td>180kg</td>
</tr>
<tr>
<td>Wheelchair</td>
<td>120kg (approx)</td>
</tr>
<tr>
<td>Ultrasound Table</td>
<td>180kg</td>
</tr>
<tr>
<td>ANC Examination Couch</td>
<td>225kg</td>
</tr>
<tr>
<td>Birth Centre Trolley</td>
<td>227kg</td>
</tr>
</tbody>
</table>

The clinical manager for inpatient services should be informed of any woman whose weight exceeds these thresholds so specialist equipment can be sought. All departments likely to be involved in the care of the woman e.g. scan department/ portering service should be informed in time for them to make suitable arrangements if necessary. This is the responsibility of the lead midwife for Antenatal Clinic

Any plan of care should be discussed with and agreed by the woman and clearly documented see care pathway

11 INTRAPARTUM CARE

Women with a BMI ≥35kg/m² should be cared for on the labour ward under the care of a consultant obstetrician.
11.1 Manual Handling and Equipment

A manual handling risk assessment will have been completed for women with a BMI >40 in the third trimester of pregnancy to determine manual handling requirements for childbirth and consider tissue viability issues. A copy is sent to the Labour ward lead (stored in a folder on Labour ward) to ensure equipment is in place to meet the woman’s special requirements when she is admitted for birth.

 Appropriately sized blood pressure cuff should be used to ensure accurate readings.
All equipment should already be in place to meet the woman’s special requirements.

11.2 Medical Staff

The obstetric registrar, anaesthetic registrar and theatre staff should be informed of the admission of any women in labour with a BMI ≥40kg/m² and be present on the labour ward for delivery.

The plan of care determined antenatally by the anaesthetic consultant should be followed. Early anaesthetic involvement should be sought, including early intravenous access if this is likely to be technically difficult.

An obstetric management plan should already be documented in the antenatal notes and this should be reassessed and recorded in the labour record. Referral should be made to the woman’s consultant or the consultant on call if there are any concerns about the management plan.

The decision as to which clinician should undertake a caesarean section should this become necessary must be taken by the obstetric consultant on call for the labour ward if this has not been specified in the antenatal management plan.

If surgery is anticipated, the on call consultant anaesthetist must be informed.

All staff should maintain a low threshold for requesting consultant level assistance in any aspect of care.

11.3 Care of the Woman in Labour

In addition to the normal care given to women in labour, the following measures should be considered for women with BMI ≥35kg/m²:

- Oral intake should be restricted to clear fluids only. Fluid balance chart to be maintained
- Ranitidine 150mg Orally should be given 6 hourly throughout active labour
- Consideration should be given to the early siting of an epidural catheter if the woman intends to use this method of pain relief
- Obesity is risk factor for PPH. Active management of third stage is advocated. Consider 40 units Syntocinon in 500mls normal saline to run over 4 hours in addition to routine 3rd stage oxytocics.
- Obese women are at increased risk of shoulder dystocia. Senior midwifery and obstetric staff should be available at the delivery

11.4 Fetal Monitoring

If continuous electronic monitoring is indicated, a fetal scalp electrode (FSE) may be necessary if external monitoring is proving difficult. The use of FSE is contraindicated in some
circumstances. For further information, please refer to Maternity Guideline – Electronic Fetal Monitoring.

11.5 Emergency Caesarean Section and Operative Vaginal Delivery

Women with a BMI $\geq 30\text{kg/m}^2$ requiring operative vaginal delivery should be transferred to theatre for the procedure.

Theatre staff should be informed as early as possible regarding the woman’s transfer to theatre so they can make appropriate arrangements e.g. extra personnel and specialist equipment.

The consultant obstetrician and consultant anaesthetist on call for labour ward must be informed of any obese woman requiring operative delivery.

11.6 Elective Caesarean Section

At the time of booking the elective caesarean section a manual handling risk assessment should be completed. If any additional equipment is required it should organised. Theatre and the postnatal ward should be informed.

11.7 Immediate Post Delivery Care

Maternal Monitoring

- A manual handling risk assessment should be completed
- Appropriate BP monitoring using appropriate size BP cuff
- Appropriate sized anti-embolic stockings if required
- Early mobilisation to avoid pressure sores

Postoperative Care

- Maintain hydration and accurate fluid balance management
- Pulse oximetry and regular assessment of respiration
- Maintain effective post operative analgesia to enable early mobilisation
- Effective breathing and lung expansion
- Leg exercises and to see physiotherapist as early as possible
- Daily wound review by a senior obstetrician
- A broad spectrum antibiotic should be given prophylactically for 3-5 days

National Institute for Health and Clinical Excellence (NICE) Clinical Guidelines, No. 132 Caesarean Section (2004) this would be prescribed by the Obstetric SpR when the woman is reviewed in recovery

- Daily wound inspection is essential
- Early ambulation
- Anti embolic stockings must be worn for duration of inpatient stay

It is essential to plan follow up care, particularly if there have been any wound problems or other complications. It is worthwhile looking critically at the operation and hospital stay in order to identify areas for improvement/risk management issues if there are any.

12 POSTNATAL CARE

Low Molecular Weight Heparin should be recommended for the duration of the inpatient stay. A longer duration of prophylaxis may be recommended if the woman has other risk factors. For
further information, please refer to Maternity Guideline – Venous Thromboembolism Maternity Guideline 2012

13 Women with a BMI ≤18.5kg/m2
Underweight women (BMI ≤18.5kg/m²) are at increased risk of giving birth to premature and small-for-gestational-age babies and consequently need careful monitoring. These women should be referred at booking to an obstetrician for an assessment of the most appropriate pattern of antenatal care. Referral to a dietician may also be appropriate.

Fetal growth and wellbeing should be carefully monitored throughout pregnancy by means of discussion with the woman on her assessment of fetal growth, abdominal palpation and symphysis/fundal height measurement. If there is concern about the rate of fetal growth, a consultant referral should be made. Serial ultrasound for fetal growth is offered at 28, 32 and 36 weeks.

Underweight women should be encouraged to have their weight checked at each antenatal visit. A static weight or weight loss in underweight women is worrying and should prompt a consultant referral for further investigation.

14 TRAINING

Newly ratified guidelines are uploaded to the intranet; staff are informed of this via the departmental newsletter. All staff have the responsibility to ensure awareness of the contents of the guideline.

Staff have the responsibility to inform their line manager of any training needs which may affect their ability to follow this guideline

14.1 Equality Impact Assessment

The Equality Impact Assessment for this policy is attached in Appendix A.
15 MONITORING COMPLIANCE

In order to monitor compliance the guideline will be audited in line with the Key Performance Indicators identified in the NHS Litigation Authority CNST Maternity Standards.

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Tool</th>
<th>Frequency</th>
<th>Lead</th>
<th>Reporting arrangements</th>
<th>Acting on recommendations and Leads.</th>
<th>Change in practice and lessons to be shared</th>
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<tbody>
<tr>
<td>a. calculation and documentation of body mass index (BMI) in the health records</td>
<td>A single audit tool will be used to capture the key elements of this policy</td>
<td></td>
<td>Lead obstetrician and midwife for Obesity</td>
<td>The audit report will be submitted to the Maternity Quality Board</td>
<td>The lead for any necessary action planning will be identified and actions will be agreed at the Maternity Quality Board meeting. The action plan will specify the time frame and will be monitored at the maternity quality board meetings</td>
<td>Required changes in practice will be identified and implemented. Changes will be shared both internally and externally where appropriate.</td>
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<tr>
<td>b. calculation and documentation of the BMI in the electronic patient information system</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
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<tr>
<td>c. requirement that all women with a BMI &gt;30 should be advised to book for maternity team based care</td>
<td>A single audit tool will be used to capture the key elements of this policy</td>
<td></td>
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<tr>
<td>d. requirement that all women with a BMI &gt;35 should be advised to deliver in an obstetric led unit</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
<td></td>
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<tr>
<td>e. requirement that all women with a BMI &gt;40 have an antenatal consultation with an obstetric anaesthetist</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. requirement that a documented obstetric anaesthetic management plan for labour and delivery should be discussed with all women with a BMI &gt;40</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>g. requirement that all women with a BMI &gt;30 have a documented antenatal consultation with an appropriately trained professional to discuss possible intrapartum complications</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
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<tr>
<td>h. requirement to assess the availability of suitable equipment in all care settings for women with a high BMI</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. requirement that all women with a BMI &gt;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</td>
<td>An annual audit of the key elements to be monitored will be carried out</td>
<td></td>
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16 REFERENCES


17 ASSOCIATED DOCUMENTATION

CHS Maternity guidelines:
Clinical risk Assessment (Antenatal)
Clinical Risk Assessment (Labour)
### 18 VERSION HISTORY TABLE

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<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Ratified by</th>
<th>Comment/Reason for change</th>
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<td>Pearl Simpson</td>
<td>Maternity Quality Board</td>
<td>New Document</td>
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<td>1.1</td>
<td>April 2011</td>
<td>Pearl Simpson</td>
<td>Maternity Quality Board</td>
<td>Amended document with change to BMI level for anaesthetic referral from 35 - 40</td>
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<td>1.2</td>
<td>January 2013</td>
<td>Bini Ajay and Pearl Simpson</td>
<td>Maternity Quality Board</td>
<td>Reviewed in line with CNST Maternity Standards 2012/2013&lt;br&gt;Changes made VTE cross referenced&lt;br&gt;Monitoring revised</td>
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# APPENDIX A – EQUALITY IMPACT ASSESSMENT

<table>
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<th>Yes/No</th>
<th>Comments</th>
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<td>1.</td>
<td>Does the policy/guidance affect one group less or more favourably than another on the basis of:</td>
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<td></td>
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<tr>
<td></td>
<td>Race</td>
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<td>Ethnic origins (including gypsies and travellers)</td>
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</tr>
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<td></td>
<td>Nationality</td>
<td>No</td>
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<td>Gender</td>
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<td>Culture</td>
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<td>Religion or belief</td>
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<td></td>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
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<tr>
<td></td>
<td>Age</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disability - learning disabilities, physical disability, sensory impairment and mental health problems</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Is there any evidence that some groups are affected differently?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Is the impact of the policy/guidance likely to be negative?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>If so can the impact be avoided?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>What alternative are there to achieving the policy/guidance without the impact?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Can we reduce the impact by taking different action?</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

If you have identified a potential discriminatory impact of this procedural document, please refer it to the Maternity Risk Manager, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions please contact the Maternity Risk Manager bleep 354.
## APPENDIX B – CONSULTATION TEMPLATE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Procedural Document’s Name:</td>
</tr>
<tr>
<td>2.</td>
<td>Procedural Document Author:</td>
</tr>
<tr>
<td>3.</td>
<td>Group/Committee Consulted:</td>
</tr>
<tr>
<td>4.</td>
<td>Date of Consultation:</td>
</tr>
<tr>
<td>5.</td>
<td>Comments Received:</td>
</tr>
<tr>
<td></td>
<td><strong>Changes recommended by MMC:</strong></td>
</tr>
<tr>
<td></td>
<td>Section 8.3 about venous thromboembolism (VTE), last sentence should states all women with BMI greater than 40 should be prescribed LMWH unless contraindicated.</td>
</tr>
<tr>
<td></td>
<td>The committee will like to know (BM)</td>
</tr>
<tr>
<td></td>
<td>● Who will be prescribing the LMWH</td>
</tr>
<tr>
<td></td>
<td>● When will the drug be prescribed</td>
</tr>
<tr>
<td></td>
<td>● Who is responsible for monitoring this (included in monitoring section 13)</td>
</tr>
<tr>
<td></td>
<td>All IU must be changed to units (GK)</td>
</tr>
<tr>
<td></td>
<td>Section 10.7.2 seventh bullet point which says that a broad spectrum antibiotic should be given prophylactically for 3-5 days as per NICE guideline. The NICE guideline must be specified and a link to the NICE guideline should be provided. (FT</td>
</tr>
<tr>
<td>6.</td>
<td>Highlight where policy changed following consultation or state reasoning why comments not incorporated:</td>
</tr>
</tbody>
</table>
APPENDIX C – DIETETIC REFERRAL FORM

Request for Dietary Advice in Pregnancy

NB Please write clearly and complete all the boxes. Lack of information may cause delays in patients being seen

<table>
<thead>
<tr>
<th>Patient details</th>
<th>Surname</th>
<th>Title</th>
<th>Mrs/Miss/Ms</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td>Date of Birth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postcode</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone number</th>
<th>Home</th>
<th>Work</th>
<th>Mobile</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NHS/Hospital Number</th>
<th>Ethnic Group</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Transport Required</th>
<th>Yes/No</th>
<th>Interpreter required</th>
<th>Yes/No</th>
<th>Patients first language</th>
</tr>
</thead>
</table>

Reason for referral/Dietary advice required –

Gestation in weeks:

Current weight = Height = BMI =

PM History:

Relevant Blood Tests or Investigations (eg FBS, RBS, HbA1c, Lipid profile)

Medication
NB – if diagnosed with gestational diabetes they will have access to the dietician within Gestational clinic

<table>
<thead>
<tr>
<th>Referrers Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of referrer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address of referrer</th>
<th>Telephone/email address</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name of GP</th>
</tr>
</thead>
</table>

Signed Date

Please send referral to:
Dietetic Dept, Croydon University Hospital, Croydon, Surrey, CR7 7YE. Tel No. : 020 8401 3096 Or Fax to 020 8401 3598 Or E-mail to dietetic.department@croydonhealth.nhs.uk
APPENDIX D – ANAESTHETIC REFERRAL FORM

(For office use only - Classification of referral Priority/Routine. Date received )

<table>
<thead>
<tr>
<th>ANAESTHETIC REFERRAL FORM FOR ANTENATAL PATIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(not to be used for routine caesarean section or postnatal problems)</td>
</tr>
</tbody>
</table>

Patients with the following co-existing conditions should be referred to the anaesthetic department as early in the pregnancy as possible. Fax the completed form to the Anaesthetic Secretary, Croydon University Hospital on ext 3621.

- Back problems (severe kyphoscoliosis, intervertebral disc problems, orthopaedic surgery to back etc.)
- Neuromuscular problems (multiple sclerosis, motor neurone disease, muscular dystrophy etc.)
- Heart disease (congenital heart disease: VSD, ASD, ischaemic heart disease, angina, uncontrolled essential hypertension etc.)
- Severe diabetes
- Respiratory disease (severe asthma etc.)
- Sickle cell disease
- Previous anaesthetic problems (difficult intubation, malignant hyperpyrexia etc.)
- Bleeding & clotting disorders (haemophilia, von Willebrand’s disease etc.)
- Jehovah’s Witnesses
- BMI ≥ 40kg/m²
- Any other conditions which would affect anaesthetic care during pregnancy & labour (if you would like to discuss with an anaesthetist, please contact 0208 401 3307/3305)

Name…………………………………………………… Address………………………………………………

Date of Birth……………………………………… Hospital Number……………………………………

EDD……………………………………………… Tel No………………………………………………

Date of Referral……………………………… Obstetric Consultant……………………………………

Reason for Referral……………………………………………………………………………………………………

………………………………………………………………………………………………………………………………

Relevant Medical/Obstetric History……………………………………………………………………………………

………………………………………………………………………………………………………………………………

Any Investigations/Results………………………………………………………………………………………………

………………………………………………………………………………………………………………………………

Refereed by…………………… Designation………… Signature……………………

Contact No…………………………….. Date/Time………………………………………………

FOR ANAESTHETIC USE ONLY

Clinic Date………………………………………………………………………………………………………………

Brief Plan……………………………………………………………………………………………………………………

January 2013
# Care Pathway for women with BMI ≥ 30

## Booking appointment at 8-10 weeks.
- Routine booking plus bloods
- Refer to Obstetric Consultant
- Arrange G.T.T to be performed at 28 weeks gestation
- Measure Height, Weight calculate BMI, document and record on protos
- Measure arm circumference, document in hand held notes. If greater than 35 cm use large B.P. cuff.
- Consider other morbidity factors
- VTE risk assessment

### Discuss:-
- Hypertension and pre-eclampsia
- Gestational diabetes
- Venous Thrombosis
- Depression
- Advise on moderate exercise and healthy eating

## Women with a BMI ≥ 30:-
- USS 28 & 36 weeks gestation
- Repeat VTE assessment at 28 and 36 weeks gestation
- Refer to joint drop in healthy eating & nutrition sessions
- Consultant review 20 weeks gestation
- Consultant obstetrician follow up appt 36 weeks gestation
- Reweigh at 36 weeks gestation

## Women with a BMI ≥ 35:-
- Measure for anti embolic around 34 weeks. If non standard size order via antenatal clinic
- Consultant obstetric clinic review at 41 weeks.
- The Midwife must not arrange routine I.O.L.

## Women with a BMI ≥ 40:-
- Referral for anaesthetic review to be made at the 28 week appointment.
- Refer to Trust Bariatric patient policy to arrange equipment if required
- VTE assessment all women to receive LMWH

## Women with a BMI ≥ 35 admitted in the antenatal period
- Must 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 caesarean section is planned/likely 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.

## Women with a BMI ≥ 35 admitted in labour
- Care advised on Labour ward
- Senior Obstetrician to be informed and plan documented
- Senior labour ward anaesthetist to be informed for anaesthetic review unless the woman has already had an antenatal anaesthetic review.
- Wear anti embolic stockings in labour
- Secure intravenous access, send bloods for Group and Save and Full blood Count.
- 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.
- Give oral Ranitidine 150mg 6 hourly and oral metoclopramide 10mg eight hourly if nil by mouth for over six hours intravenous fluids must be prescribed.
- If C.T.G monitoring is needed, may require fetal scalp electrode to monitor
- If epidural requested/advised, early insertion is preferable.
- 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 Metoclopramide) has been given within the last eight hours.
Labour ward or O/C consultant obstetrician must be aware of the woman’s high B.M.I. If the B.M.I 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**
- VTE assessment
- Early mobilisation
- Anti embolic stockings
- Refer to trust policy on pressure area care