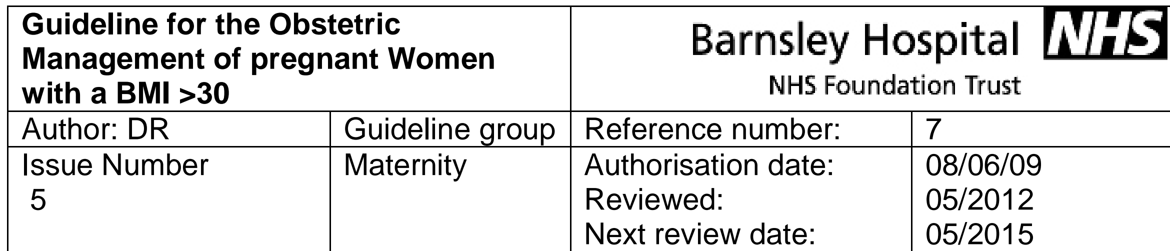

Guideline for the Obstetric Management of pregnant Women with a BMI >30		Barnsley Hospital NHS NHS Foundation Trust	
Author: DR	Guideline group	Reference number:	7
Issue Number 5	Maternity	Authorisation date: Reviewed: Next review date:	08/06/09 05/2012 05/2015

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Introduction

Rationale

The purpose of this guideline is to outline appropriate management strategies for women with a BMI of >35, therefore minimising clinical risks for the women and health and safety risks to staff

Scope

This guidance applies to all staff working within maternity services at BHNFT and in community

Principles

- To ensure all women undergo appropriate risk assessments during the antenatal, intrapartum and postnatal periods for any aspects of care where maternal increased BMI is a factor.
- To ensure that these women have a full assessment of the equipment required to meet their personal needs and ensure that any moving and handling issues are addressed appropriately to maintain the health and safety of the woman and the staff caring for her.
- To ensure staff follow trust Policies and Procedures for the assessment and care of a pregnant woman with an increased BMI.

Background

The prevalence of obesity in the UK population is increasing: 32 % of 35 - 64 year old women are overweight (body mass index (BMI) 25 – 30) and 21 % obese (BMI >30). The percentage of adults who are obese has roughly doubled since the mid 1980s. (Ref 1). Recent local data suggests 36 % of the adult population in Barnsley have a BMI of 30 or greater.

The 2007 “Saving Mothers Lives” report stated that half of the deaths occurred in women who were obese and 1/7 of these women was morbidly obese (BMI =/> 40). (Ref 2).

Obesity is a recognised risk factor for a range of antenatal, intrapartum and postpartum complications. It poses important Occupational Health and Safety (OH & S) concerns for staff caring for obese women.

WHO Classification:

Normal range BMI 18.5 – 24.9 No increased obstetric or maternal risk

Overweight BMI 25 – 29.9 No increased obstetric or maternal risk

Obese I BMI 30 -34.9 Mildly increased obstetric and maternal risk

Obese II BMI 35 -39.9 Moderately increased obstetric and maternal risk

Obese III BMI > / = 40 Significantly increased obstetric and maternal risk. (*Obese III formerly known as morbidly obese)*

Risks include:

Antenatal -

Gestational diabetes
Hypertension, pre-eclampsia
Abnormal fetal growth – macrosomia/intra-uterine growth retardation
Undiagnosed fetal anomaly
Stillbirth
Sleep apnoea

Intrapartum -

Failure to progress in labour /failed induction
Difficulties in monitoring fetal heart
Inadequate analgesia
Shoulder dystocia
Unsuccessful vaginal birth after caesarean section
Emergency caesarean section (CS)
Technically difficult CS, with associated increased morbidity and mortality

Postpartum -

Wound infections post operative delivery
Thrombo-embolic events
Post partum Haemorrhage
Neonatal Death
Postnatal depression

Anaesthetic -

There are inherent difficulties in calculating the correct drug dose as dose is based on lean body mass. This means high chance of incorrect drug dose (e.g.) incorrect induction agent, muscle relaxant.
Regional anaesthesia more difficult to site with unpredictable spread of local anaesthetic and an increased likelihood of the cannular dislodging
Increased difficulty in positioning the woman
Airway maintenance and intubation may be difficult especially in an emergency setting. It may be difficult to ventilate the lungs due to low lung compliance, also difficult to diagnose any cause of hypoxia due to quiet nature of breath sounds.
Elective surgery is high risk but in an emergency the risk is higher
Any woman who vomits/regurgitates under GA is at higher risk of aspiration. The risk is exacerbated by the requirement of more staff to safely manoeuvre the woman onto her side

Increased maternal risk of morbidity and death for both mother and baby
Oxygenation difficult due to abdominal pressure
Non –invasive BP cuffs may not be reliable
In the postoperative period there may be a need for extra staff or equipment

Guideline Outline

Pre-pregnancy

Women with an increased BMI should be encouraged to seek pre-conceptual advice from an appropriate source where the following issues could be addressed:

- Weight loss will reduce the risks of pregnancy complications
- Women should be encouraged to avoid excessive weight gain in pregnancy
- Referral to a dietician may be necessary
- Screening for diabetes may be necessary
- Women should commence Folic acid 5mg.

Booking

- Discuss healthy life styles including healthy eating / eating habits and levels of current and recommended physical activity. Dispel any myths i.e. no need to eat for two. Adopt healthy eating style rather than a weight loss programme.

First Hospital Visit

- Measure height, weight and calculate BMI accurately if not already done. Record as a minimum in the antenatal care plan of the hospital records and complete the appropriate documentation for data entry onto the electronic information system. Transfer the information onto the hand held records where possible.
- Complete a risk assessment form for pregnant women with a BMI >35

According to her BMI the following plan of care will be initiated:

Antenatal

BMI >30

- Offer screening for diabetes – GTT at 28 weeks
- All women with a BMI >30 will be advised to book for maternity team based care. If the woman has complications this team will include an obstetrician, anaesthetist, midwife and neonatologist.

- Women with a\ BMI >30 will have an antenatal consultation with an appropriately trained professional to discuss intrapartum complications and have the discussion documented in the health record.

<u>BMI >35</u>

- Advise delivery in an obstetric led unit under shared care following the high risk pathway

- Advise on the associated risks and how these can be minimised using the managing your weight in pregnancy leaflet.

- Offer referral to a dietician or appropriately trained professional.

- Complete a thromboprophylaxis risk assessment

- If there are additional risk factors for pre-eclampsia commence a low dose aspirin as recommended by the RCOG

- A third trimester scan (28-34 weeks) to assess fetal growth should be considered and additional scans may be required for presentation or marked increase in weight

- Consider the detailed anomaly scan being booked for a later gestation of 21-22 weeks. Record maternal BMI on the scan request card.

<u>BMI >40</u>

- BMI >40 offer the anaesthetic leaflet and offer referral for an anaesthetic review so that potential difficulties with venous access, regional or general anaesthesia can be identified. An anaesthetic management plan will be discussed with the woman and documented in the medical records.

- Make a 36 week appointment in ANC for re-weighing and assessment to determine manual handling requirements for childbirth, considering tissue viability issues. To be documented on the obesity risk assessment form.

Intrapartum/Delivery

<u>BMI >30</u>

- Active management of the third stage of labour should be offered.

- If the woman is for an Elective Caesarean Section the maternal weight should be entered onto the theatre list to allow theatre staff to perform a risk assessment.

BMI >35

- Aim to deliver women during normal working hours where possible taking into consideration the availability of senior midwives, consultant obstetricians and anaesthetists

- Women should have an individualized management plan for delivery.

- There is no specific requirement for continuous fetal monitoring in labour

BMI >40

- Women will have intra-venous access in labour.

- Bloods will be sent for G&S and FBC.

- Inform the on call anaesthetist and theatre staff on admission.

- Women with a BMI >40 may not be able to receive emergency anaesthesia without 2 anaesthetists being present. The "decision to deliver" times may increase.

- If the woman requires a Caesarean section the operator should be experienced (ST5 or more). A Consultant Obstetrician should be informed of the decision for surgery and may need to be present in theatre.

- Women with an increased BMI are at greater risk of Shoulder Dystocia. If instrumental delivery is required it should be discussed with consultant before being attempted.

Postpartum

- Women with an Increased BMI are at greater risk of infection. This should be considered when formulating a post natal plan of care.

- The health benefits of breast feeding for mum and baby (i.e.) maternal weight loss and reduced likelihood of childhood obesity should be emphasised to women with an increased BMI

- Women will have thromboprophylaxis risk assessment performed and treatment as appropriate.

- Women with a BMI >35 will be offered health advice suggesting reducing their weight prior to their next pregnancy (A loss of 4-5 kgs. or 10lbs. between pregnancies reduces the risk of Gestational Diabetes Mellitus).

The requirement to assess the availability of suitable equipment in all care settings for women with a high BMI

Caring for the exceptionally heavy pregnant patient is becoming an increasingly common occurrence in hospital. It is very likely that at some time we may all need to use specialist or heavy-duty manual handling equipment to ensure that these women are cared for safely and we prevent any further complications occurring, and to maintain the health and safety of the staff caring for her.

Therefore it is vital that we assess the availability of all equipment that may be required in all care settings for use with the pregnant woman. It is everyone's responsibility to ensure that we accommodate these women's needs appropriately and with as much dignity as possible. Therefore we need to be aware what equipment is available for use within maternity services, what weight it will accommodate and how to obtain it.

Equipment will be audited annually to ensure the unit has enough equipment to meet the needs of patients and is readily available for use. Any staff who finds equipment to be faulty or unsuitable for use will report their findings to the ward manager, who will get the equipment replaced.

The availability of equipment for maternity:

Large Blood Pressure Cuffs

Women with a raised BMI often require a large BP Cuff in order to obtain an accurate blood pressure reading. Large BP cuffs can be found in the following areas:

- All the community midwives carry a large cuff as part equipment as standard. There are spares in the community store in case any become lost or damaged.
- In Antenatal clinic there is one large cuff available in the phlebotomy room to use with women with a large BMI.
- On ANDU they have: 1 large cuff for the Datascope and 1 large manual cuff.
- On the Antenatal ward they have: 1 large cuff for the Datascope.
- On the labour ward and Midwifery led care unit they have: 1 large manual cuff and 1 large cuff for the Datascope.
- On the Postnatal Ward they have 1 large manual cuff and 2 cuffs for the Datascope.
- In maternity theatre there is 1 large cuff.

Weight Scales:

- In Antenatal clinic the scales will weigh up to 250kg (– 39 stones).
- On the ward area are standard scales and will only weight someone up to 200kg (- 31 stones 6lbs)

Whilst unlikely that we would get a pregnant woman over this weight – the Trust does have some roll on roll off scales as indicated in the Trust equipment list. This can be obtained via the equipment library.

Safe Working Loads for the Beds / Trolleys Used On Maternity

The following are safe working loads for the beds / trolleys used in maternity:

- The Plinth 2000 couches in Antenatal Clinic will bear a woman up to 35 stones (225kg) in weight.
- Currently the beds on the antenatal ward are old – many are fixed height beds. These beds will safely bear a woman up to 25 stones (160Kg) in weight. If a woman is admitted over this weight a bed will need to be obtained from the postnatal ward OR a suitable specialist bed will need to be obtained.
- The beds on the postnatal ward will safely bear a woman up to 250Kg (39 stones 9lbs) in weight. Above this weight a specialised bed will need to be obtained.
- On delivery suite the beds will safely carry a load off up to 227Kg (36 stones). Any woman over this weight will require a specialist bed for labour and delivery.
- The QA3 Anetic Air trolleys in the triage area will safely bear a weight of 250Kg (39 stones 9lbs).
- There are two models of theatre tables: The RX 500, currently used in labour ward theatre, will carry a weight of 225Kg (35 stones). The RX 600, currently used in main theatre, will carry a weight of 40 stones (256Kg). Anyone over this weight will need a specialist bed for surgery.

Moving and Handling Equipment

The Ward areas and Clinic have Red low friction slide sheets for the transfer of patients from bed to bed; Bed to trolley; Bed to theatre table.

The Labour Ward and Obstetric theatre have blue Pat Slides to be used with the low friction slide sheets for the transfer of patients safely.

Other Equipment Required

TED stockings in all sizes are available on the ward areas and Labour Ward. Staff have been trained to measure the women to obtain the appropriate size. Tape measures are available in each area. A size chart is available with the stock of TED stockings.

Where Do I Obtain Specialised Equipment?

In the first instance, the equipment we have on site may be obtained via the porters on bleep 233 or out of hours by contacting the duty manager on bleep 219. The moving and handling specialist should be informed of the arrival of any exceptionally heavy patients by contacting him on Ext 4939 or e mail.

Specialist equipment is stored in the basement bed store. The amount of specialist equipment is limited to that listed below and if it is already in use then similar specialist items may have to be hired in, in the event of multiple admissions of these patients.

Specialist equipment available in the Trust:

- Four Huntleigh Contoura 1080 electrical profiling bed with integral weighing system which is good for 70 stones.
- Three Viking Liko Hoists SWL of 250 KG
- Three electric rise armchairs good for 470 stones
- Four static armchairs good for 50 stones.
- Three wheelchairs good for use up to 50 stones
- One battery operated wheelchair good for 40 stones
- Two Marsden wheelchair weighers with BMI option and one set of roll on roll off ramps in order to weigh a bariatric patient upon their wheelchair.
- One A Frame Gantry hoist which will accommodate 55 stones is kept with estates and requires the duty engineers to assemble when required. This equipment is particularly bulky and will take up two bed spaces. **It is advised that this should only be used as a last resort to be used where the use of the mobile hoist would be unsafe.**
- Three heavy-duty zimmer frames
- Four heavy duty commodes
- Eighteen heavy duty slings, 2x225Kg, 14x250Kg,(available in small medium and large sizes depending on patients shape) 2x300Kg.

Hiring equipment is done by obtaining management permission, contact the duty bleep holder out of hours, and then contacting the relevant company for prices and to arrange delivery. The cost of the equipment hire is assumed by the area that the patient is admitted to. Most hire arrangements are made through Huntleigh Hire Line 08457342000 BHNFT account no. HR291. The account number should be quoted when hiring equipment and a reference number obtained from the company. This reference number must be recorded on the risk assessment in the patient notes.

The requirement to document individual management plans in the health records of women who require specialised equipment

This is done via the Risk assessment for the obese pregnant woman which is completed at the first hospital visit and the third trimester. The woman's requirements for specialised equipment and the patient movement plan should be completed. Any woman who codes A (– requiring assistance moving and handling) OR U (– unable to move) should have a full moving and handling assessment completed. The Waterlow pressure ulcer risk assessment should also be completed.

Roles and Responsibilities

All staff working in the Maternity Unit at BHNFT and in Community are responsible for ensuring this guideline is followed

Dissemination and Access

This copy will be available on the intranet or via the Practice Facilitator Midwife.

Training

Training will be given as documented in the Maternity Training Needs Analysis and Trust Training Needs Analysis. This is updated on an annual basis.

Audit / Monitoring

Obesity will be audited in line with the annual audit programme, as agreed by the CSU. The guideline will be audited, as a minimum, on a three-year basis. The results will be reviewed and presented to the multidisciplinary audit meeting. Any deficiencies will be actioned via the audit action plan to try and improve safety and learn from previous mistakes. The audit action plan will be reviewed at the monthly risk management meetings on a quarterly basis and monitored by the risk midwife to ensure that improvements in care are made.

Equipment will be audited annually to ensure the unit has enough equipment to meet the needs of patients and is readily available for use. Any staff who finds equipment to be faulty or unsuitable for use will report their findings to the ward manager, who will get the equipment replaced.

Any adverse incidents relating to obesity will be monitored via the incident reporting system. Any problems will be actioned via the case review and Root cause analysis action plans. The action plans are monitored by the risk midwife to ensure that improvements in care are made. The trends and any

root cause analysis are discussed at the monthly risk meetings to ensure that appropriate action has been taken to maintain safety.

References

CMACE / RCOG Joint Guideline: Management of women with obesity in pregnancy. March 2010. RCOG.

Clinical Negligence Scheme for Trusts. Maternity clinical risk Management Standards. (2009/10).Standard 3, Criterion 10

Obesity in Pregnancy Yu C, Teoh T, Robinson S. BJOG 2006; 1117-1125

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Effect of Body Mass Index on pregnancy outcomes in nulliparous women delivering singleton babies. Battacharys,Cambell D, Liston W et al 24/7/07 BMC Public Health p1-8

Glossary of terms

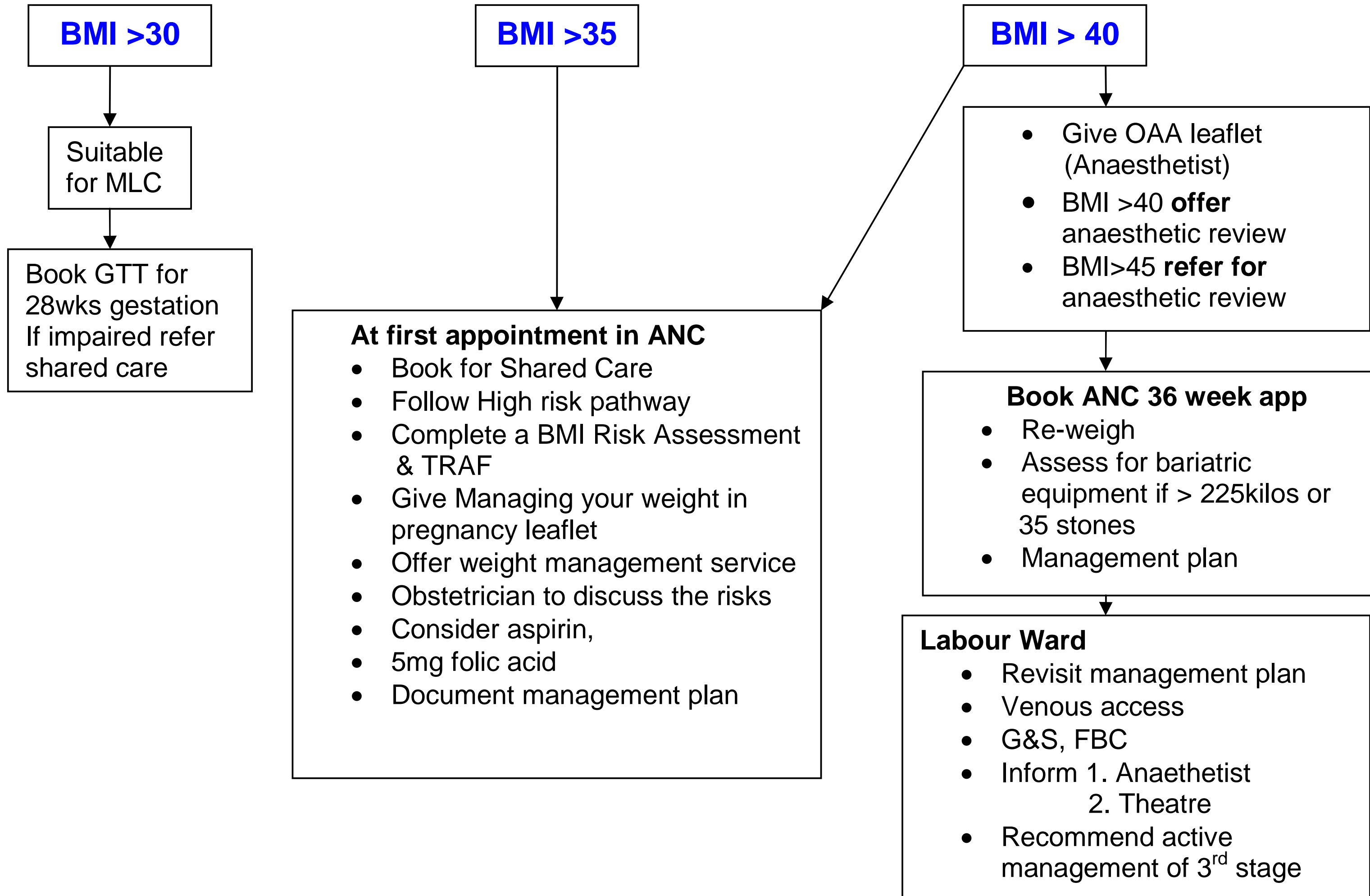
ANC – Antenatal clinic
ANDU – Antenatal day unit
BHNFT – Barnsley Hospital NHS Foundation Trust
BMI – Body mass index (a person's weight in kilogram's divided by the square of their height in metres)
BP – Blood Pressure
DVT – Deep vein Thrombosis
FBC – Full Blood Count
GA – General Anaesthetic
GTT – Glucose Tolerance Test
G&S – Group and Save
IV – Intravenous
NHS – National Health Service
OH&S – Occupational Health and Safety
PE – Pulmonary Embolism
RCOG – Royal College of Obstetricians and Gynaecologists
USS – Ultra sound scan
WHO – World Health Organisation

Equality Impact Assessment

Women's and Children's Services are committed to ensure that both current and potential service users and their families will not be discriminated against on the grounds of religion, gender, race, sexuality, age, disability, ethnic origin, social circumstance or background. The principles of tolerance, understanding and respect for others is central to what we believe and central to all care provided.

Appendix 1

BMI >30 in Pregnancy



Obstetric Guideline Checklist

Guideline for the management of Women with BMI's> 35	**Lead Professional Dr. Khanem/Gill Jepson(reformatted)**	**Review Date May 2015**

Formatting	Included/attached
Headings	included
Quality Impact Statement	included
References	included

Consultation Process	Date Disseminated/Presented	Relevant information
Initial circulation to Guideline Group and relevant parties (draft 1)	01/01/11	Reviewed
Amended draft sent to development lead		
Final Draft presented to Guideline Group for ratification	08/05/12	Ratified 08/05/12
Amended/final Draft presented to Women's Governance group for Ratification	14/05/12	Ratified 14/05/12

Archiving	Date of distribution	Date of retrieval of old guideline	Date of Archiving
Distribution and Retrieval			

Training Package devised	Date	
Training Package Delivered	Date	

Audit/ Monitoring	Method	Date Commenced	Date Completed
Audit Process			
Monitoring process	Trust's Accident/incident reporting system(IR1)		