Mid Cheshire Hospitals

NHS Foundation Trust

OBESITY
Maternity Manual guideline

Version: 2

Date of Issue: January 2012

Review Date: January 2015

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Approved on: January 2012

Approved By: *Obstetric & Gynaecology & Sexual Health Governance Committee*

Distribution to: All clinical staff working within the MCHFT Maternity Service

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OBESITY

1. INTRODUCTION

1.1 DEFINITION

Obesity is measured by calculation the body mass index (BMI) using the formula:

BMI (Quetlet index) = weight (Kg)/[height (m)^2

BMI	Classification
<18.5	Underweight
18.5 - 24.9	Normal Weight
25 - 29.9	Overweight
30 – 39.9	Obese
40 or more	Morbidly Obese

CEMACH (2008-2010) have selected obesity in pregnancy as its principal project and will cover all maternity units in the UK.

1.2 There is substantial evidence that obesity in pregnancy contributes to increased mortality and morbidity for both mother and baby.

1.3 Cemach Perinatal Mortality (2005 Report) found approximately 30% of mothers who had a stillbirth or, neonatal death were obese.

1.4 CEMACH (2007) report indicated that more than half of women who died from direct / indirect causes were obese and highlighted an urgent need to formulate a national guideline for management of obesity in pregnancy.

Nice Guidance:

- Recommends pregnant women must have BMI checked at booking. (NICE 2008)
- Women with BMI above 35 should not have routine midwifery care. (NICE 2008)
- Women with BMI above 35 are at a higher risk of VTE.(NICE 2008)

2. OBESITY

2.1 The risks of obesity in pregnancy

Obese women have an increased risk for the following:

2.1.1 Maternal

- Miscarriage
- Gestational diabetes
- Hypertension / pre-eclampsia
- Pre-term labour
- Prolonged labour
- Thromboembolism
- Difficulty monitoring the fetus during ante and intrapartum period
- Difficulty performing ultrasound scan
- Caesarian / instrumental vaginal deliveries
- Shoulder dystocia
- PPH
- Post Caesarian wound infection Increased incidence of perineal trauma
- Increased incidence of genital and urinary tract infection
- Reduced breast feeding rate

2.1.2 Infant

- Intrauterine death
- Early neonatal death
- Reduced birth weight
- Increased birth weight / macrosomia

- Neural tube defects
- Hypoglycemia
- Meconium aspiration
- Increased risk of birth injury
- Child adiposity
- Intrauterine death / stillbirth

2.2 Antenatal Management

2.2.1 Calculation of BMI

At booking appointment the woman's height and weight are recorded and the BMI is calculated, in order to identify any pregnant women with a BMI > than 30 so that appropriate care can be provided. (e.g diabetic screening).

This is then documented on the hand held records/ Sigma.

The woman is advised on the benefits of moderate exercise and healthy eating and referred to a dietician if help required.

2.2.2 Pathways for women with raised BMI (See Appendix 1)

- BMI 30-34.9
  - Advised to book for maternity team based care if no other risk factors identified.
  - Glucose Tolerance Test (GTT) at 28 weeks gestation should be arranged via telephone with Antenatal Clinic.

- BMI 35-39.9
  - Advised to book with Consultant led care. Appointment made for between 11-13 weeks, where an individualized plan of care is written, according to the woman's needs and she is advised to deliver in a hospital setting
  - Glucose Tolerance Test (GTT) at 28 weeks gestation should be arranged via telephone with Antenatal Clinic (ANC)

• BMI greater than 40	- Advised to book with Consultant led care. Appointment made for between 11-13 weeks, where an individualized plan is written for ALL aspects of her maternity care, according to the woman's needs. She is advised to deliver in a hospital setting and an Anaesthetic referral is to be arranged by ANC. - Glucose Tolerance Test (GTT) at 28 weeks gestation should be arranged via telephone with Antenatal Clinic - At around 28 weeks gestation the community Midwife confirms that the Anaesthetic referral is organised.and management plan agreed and documented in the hospital in the hospital records. - The Anaesthetist will review all referral forms and arrange an appointment for women with a BMI>45 or with additional risk factors. Women with a BMI 40-45 and no other anaesthetic risk factors may not need to be seen in person but a management plan will be documented on Sigma by the Anaesthetist. - At around 30 weeks gestation - Growth scan to be arranged at ANC and reviewed by the Obstetric team - At around 36 weeks - Growth scan to be arranged at ANC and reviewed by the Obstetric team - At around 36 weeks gestation the HCA /Midwife in ANC (who is up to date with manual handling training) will assess & document manual handling requirements and consider tissue viability issues by completing the template for handling assessment of the heavy patient, and a patient information leaflet will be given.

2.3 Labour and Delivery

- BMI 30-34.9 – If no other risk factors highlighted during the pregnancy, and she has completed 37 weeks gestation then she may deliver in a low risk setting.

- BMI 35-39.9 - The written plan of care documented during the antenatal period should be reviewed and implemented.

- BMI greater than 40 – Individualised plan of care which was written during the antenatal period, will be assessed and updated, on arrival to Delivery Suite and documented in the Intrapartum Care Record.

  This will include:

  - Maintenance of skin integrity.

  - Review of Template for handling assessment of the heavy patient, which was written during the antenatal period.

  - Review of anaesthetic management plan for labour and delivery.

2.3.1 All those with a raised BMI

- **Fetal monitoring**

  - Maternal obesity is not in itself an indication for electronic fetal monitoring. Each case must be discussed beforehand and a plan of care for fetal monitoring made in the notes. The staff must review this during labour.

  - Women should be given informed choice regarding fetal monitoring. FSE should be applied only if external tracing is not of suitable quality.

- **Caesarean Section**

  - If a junior Obstetric medical staff has not yet achieved the suitable levels of competencies with women of BMI greater than 40 then the Obstetric consultant on call should be present if caesarean section is required.

2.4 Equipment

2.4.1 The Trust has a central list of all available trust manual handling equipment including the weight limits and location of each item, on the MCHFT intranet.

- MCHT intranet
  - Left hand side – Special Equipment Tracking
  - Equipment used to manage atypical patients (127KG or 20 stone).
  - Click on to equipment required to find its current location.
  - Contact the Back Care Advisor on ext 3746 to inform of change of location of equipment and leave a message.
  - If equipment not available, it may be necessary to hire this. Refer to MCHT guideline for Management of the Atypical (Heavy) patient.

2.4.2 The following equipment must be available within the maternity care setting:

- Large blood pressure cuffs with bladder dimensions of 12 x 40 cm
- Step-on scales for weighing up to 300kg
- Operating table that supports weight up to 300kg, although limited to 135kg in Lithotomy .
- Extra long, spinal and epidural needles (18-20cm) for regional analgesia
- Beds on the ante/post natal ward that supports weight up to 180kg.

3. CONSULTATION WITH STAKEHOLDERS DURING THE DEVELOPMENT OF THIS GUIDELINE

This guideline has been developed in consultation with:

- Divisional Clinical Director
- Consultant Obstetrician Clinical Lead for Obstetrics and Gynaecology
- Consultant Obstetrician Lead Obstetrician for Risk Management and Labour Ward
- Consultant Obstetrician Lead Obstetrician for Audit
- Clinical Governance Lead, Risk Manager and CNST Lead for Women's Health
- Supervisor of Midwives
- Head of Midwifery
- Obstetric, Gynaecology & Sexual Health Governance Committee

4. OTHER DOCUMENTS TO BE CONSIDERED IN CONJUNCTION WITH THIS GUIDELINE:

i. Thromboprophlyaxis in pregnancy, labour and puerperium

ii. Guideline for the Management of the Atypical (heavy) patient

5. MONITORING AND REVIEW

5.1 Monitoring the Implementation of this guideline

Adverse incidents relating to the management of the **Obesity Guideline** should be reported via the Trust Incident Reporting System, such incidents will be investigated and managed in accordance Trust Policy *'Integrated Governance & Risk Management Strategy 2010 – 2013'* March 2011.

The requirement to audit this guideline will be included in the Divisional Clinical Audit programme in liaison with the Divisional Clinical Audit Lead which will be approved by the Obstetric, Gynaecology and Sexual Health Governance meeting. The Trust Standard Action Plan will be used by the identified lead with identified timescales. Any required changes to practice will be identified and actioned within the specified timeframe by an identified lead member of the team to take each change forward where appropriate. The Action Plan is submitted to the named committee responsible for that area and the actions and timescales will be monitored by the named committee. If a timescale breaches the specified deadline, this is escalated upwards to the reporting committee. The identified lead is responsible for ensuring that all actions are completed within the timescales agreed in conjunction with the person responsible for the action. Lessons learnt will be shared with all relevant parties.

Monitoring compliance and audit requirements for this guideline, as a minimum will include:

Standard/Process/Issue	**Monitoring and Audit**			
	Method	**By**	**Committee**	**Frequency**
Calculation and recording of BMI for all women in the healthcare records/electronic patient information system	Ongoing monitoring of 1% of health records per year of women who have delivered using MCHT Maternity Monitoring Tool	CNST team	O and G Governance	Quarterly
All women with a BMI >45 should have an antenantal consultation with an obstetric anaesthetist and a management plan for labour documented in the health record	Ongoing monitoring of 1% or 10 sets of health records (whichever is the greater) per year of women who have delivered with a BMI >45 using MCHT Maternity Monitoring Tool	CNST team	O and G Governance	Quarterly
Assessment of the availability of suitable equipment in all care settings for women with a high BMI	Annual audit of equipment in all care settings	CNST team	O and G Governance	Annual

Standard/Process/Issue	Monitoring and Audit			
	Method	By	Committee	Frequency
Women with a BMI > 40 to have an individual documented assessment in the third trimester of pregnancy by an appropriately qualified individual to determine manual handling requirements for childbirth and consider tissue viability issues	Ongoing monitoring of 1% or 10 sets of notes (whichever is the greater) of health records per year of women who have delivered with a BMI >40 using MCHT Maternity Monitoring Tool	CNST team	O and G Governance	Quarterly
Annual Monitoring report	Annual report collating all monitoring data collected regarding Fetal Blood Sampling	CNST team	Clinical Audit Meeting	Annually
Audit of the processes described in the guideline on a rolling basis - processes to be audited will be selected based on any previous 'hotspots' or recent clinical incidents	Audit of a minimum of 1% of healthcare records of women who have delivered	Clinician nominated by clinical audit lead as part of departmental rolling audit programme	Clinical Audit Meeting	3 yearly

5.2 Review

This guideline will undergo review at least on a 3 yearly basis or earlier if new guidance is published.

6. REFERENCES

CEMACH (2005) Perinatal Mortality Report

CEMACH (2007) Saving Mothers Lives

CMACE/RCOG (2010) Management of Women with Obesity in Pregnancy. London: RCOG Press.

Confidential Enquiry into Maternity and Child Health. (2004). Why Mothers Die 2000-2002. London: RCOG Press. Available at: **http://www.cmace.org.uk/getdoc/28695c42-0a1e-4fd6-8601-abd01ad6c162/Saving-Mothers-Lives-Report-2000-2002.aspx** [Accessed 15 October 2009]

National Institute for Health and Clinical Excellence (NICE), 2007 *Intrapartum care guidelines.* London: NICE

National Institute for Health and Clinical Excellence (NICE) 2008 *Antenatal Care Guidelines.* London: NICE

Obesity in pregnancy guidelines (February 2009) Dartford and Gravesend NHS Trust

Appendix 1

BMI between 30 – 34.9

Gestation (weeks)	Purpose of Visit	Location/ Clinician	Appointment Date & Time
6-10	Booking history Booking bloods, MSSU Offer referral to dietician Arrange GTT at 28 weeks Discuss breast feeding VTE assessment, Offer NT 5mg folic acid Offer 10ug of vitamin D (Multivitamin supplement) Lifestyle programme	CMW	
11-13	Dating scan NT +Bloods	**Scan/ HCA**	
16-18	Antenatal examination Offer Quadruple Test if could not have NT	CMW	
18-20	Anomaly scan Mat B1	**Scan** Any afternoon or all day Friday.	
25 **First pregnancy only**	Antenatal assessment Mat B1	CMW	
28	Antenatal assessment FBC & anti-body screening, Plot SFH Discuss breast feeding SFH measurement – GROW chart Mat B1 (multips)	**CMW**	
	Anti D if required	ANC	
	GTT	ANDU	
31 **First pregnancy only**	Antenatal assessment Plot SFH	CMW	
34	Antenatal assessment Birth plan, Plot SFH	CMW	
36	Antenatal assessment Plot SFH	CMW	
38	Antenatal assessment, Plot SFH	CMW	
40 **First pregnancy only**	Antenatal assessment ,Plot SFH Offer membrane sweep	CMW	
41	Antenatal assessment, Plot SFH Offer membrane sweep offer IOL T^{+10-14}	CMW	

* Obtain and document informed consent.

BMI between 35 – 39.9

Gestation (weeks)	Purpose of Visit	Location/ Clinician	Appointment Date & Time
6-10	Booking history Booking bloods, MSSU Discuss breast feeding VTE assessment, Offer NT, 5mg folic acid Offer 10ug of vitamin D (Multivitamin supplement) Lifestyle programme	CMW	
11-13	Dating scan, NT + Bloods Offer referral to dietician Arrange GTT at 28 weeks Consider Aspirin* from 12 weeks if additional risk factor for pre-eclampsia (see Appendix 1) Individualized plan of care according to patient needs and advised to deliver in a hospital setting.	**Scan/ ANC**	
16-18	Antenatal examination Offer Quadruple Test if could not have NT	CMW	
18- 20	Anomaly scan Mat B1	**Scan** Any afternoon or all day Friday.	
25 First pregnancy only	Antenatal assessment Mat B1	CMW	
28	Antenatal assessment FBC & anti-body screening, Plot SFH Discuss breast feeding SFH measurement – GROW chart Mat B1 (multips)	**CMW**	
	Anti D if required	ANC	
	GTT	ANDU	
31 First pregnancy only	Antenatal assessment Plot SFH	CMW	
34	Antenatal assessment Birth plan, Plot SFH	CMW	
36	Antenatal assessment Plot SFH	CMW	
38	Antenatal assessment, Plot SFH	CMW	
40 First pregnancy only	Antenatal assessment ,Plot SFH Offer membrane sweep	CMW	
41	Antenatal assessment, Plot SFH Offer membrane sweep offer IOL T^{+10-14}	CMW	

* Obtain and document informed consent.

BMI 40 and above

Gestation (weeks)	Purpose of Visit	Location/ Clinician	Appointment Date & Time
6-10	Booking history, Booking bloods, MSSU Discuss breast feeding, VTE assessment, Offer NT, 5mg folic acid, Offer 10ug of vitamin D(Multivitamin supplement), Lifestyle programme	CMW	
11-13	Dating scan, NT + Bloods Arrange anaesthetic review Offer referral to dietician Arrange GTT at 28weeks Consider Aspirin* from 12 weeks if additional risk factor for pre-eclampsia (see Appendix 1) Individualized plan of care according to patient needs and advised to deliver in a hospital setting.	**Scan/ ANC**	
16-18	Antenatal assessment Offer Quadruple Test if could not have NT	CMW	
18 -20	Anomaly scan Mat B1	**Scan** Any afternoon or all day Friday.	
25 **First pregnancy only**	Antenatal assessment Mat B1	CMW	
28	Antenatal assessment, FBC & anti-body screening, Plot SFH, Discuss breast feeding SFH measurement – GROW chart Mat B1 (multips) GTT Ensure anaesthetic review	**CMW**	
30	Growth scan Review by obstetric team	**ANC**	
31 **First pregnancy only**	Antenatal assessment Plot SFH	CMW	
34	Antenatal assessment Birth plan, Plot SFH	CMW	
36	Antenatal assessment Growth scan, review by obstetric team Assess & document manual handling requirements Consider tissue viability issues	**ANC**	
38	Antenatal assessment, Plot SFH	CMW	
40 **First pregnancy only**	Antenatal assessment ,Plot SFH Offer membrane sweep	CMW	
41	Antenatal assessment, Plot SFH Offer membrane sweep offer IOL T^{+10-14}	CMW	

* Obtain and document informed consent.