Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Title of Guideline	**Care of Pregnant Women with a raised BMI**
Contact Name and Job Title (Author)	[redacted] Midwifery Matron Out patients
Division & Specialty	Surgery - Obstetrics
Guideline Number	**Obs 116**
Version Number	7.1
Date of Review	May 2023
Approving Committee(s)	Clinical Cabinet
Date of Approval	June 2020 (virtual due to COVID)
Explicit definition of patient group to which it applies	Maternity patients
Abstract	
Statement of evidence base of the guideline. Evidence Base (1-5)	

1a	Meta analysis of RCT
1b	At least 1 RCT
2a	At least 1 well designed controlled study without randomisation
2b	At least 1 other well designed quasi experimental study
3	Well –designed non-experimental descriptive studies (ie comparative / correlation and case studies)
4	Expert committee reports or opinions and / or clinical experiences of respected authorities
5	Recommended best practise based on the clinical experience of the guideline developer

Consultation Process	O&G Guideline Group
Target Audience	Maternity staff
This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.	

Care of Pregnant Women with a raised BMI

Written by [redacted] October 2010. Updated by [redacted] and [redacted] February 2012, minor wording changes October 2012. Updated by [redacted] and [redacted] March 2015 also November 2015, March 2016 and May 2016. Extended until November 2019 pending introduction of aspects of the new RCOG Green top guideline. Rewritten by [redacted] May 2020 (v7). Link to new information leaflet for anaesthetic risks added November 2020 (v7.1)

Aim

The aim is to offer women with a raised BMI, a plan of care to maximise their opportunity for good maternal and fetal outcomes. This will be achieved by discussing and planning care sensitively and in partnership with women, to empower them to engage actively with health professionals and the services that are available to them.

Introduction

Obesity is a major cause of preventable morbidity and mortality. As of 2015, it is estimated that 24% of women in the UK aged 16 years or more are obese (Health and Social Care Information Centre, 2015[1]) which is a significant increase from 16% in 1993.

Obesity has been shown to be independently associated with higher odds of dying from specific pregnancy complications (Nair, Kurinczuk et al. 2016[2]). The Saving Lives, Improving Mothers' Care report (Knight et al 2014[3]), reported that 27% of maternal deaths occurred in women who were obese.

This guideline will on focus on three groups of women:

1: women with a Body Mass Index (BMI) of 30-34.9

2: women with a BMI 35-39.9

3: women with a BMI ≥ 40.

Obesity in pregnancy is associated with an increased risk of serious adverse outcomes (RCOG 2018[4])

These include:

Maternal

- Infertility
- Miscarriage - implantation disorders
- UTI
- Gestational diabetes
- Hypertension, pre- eclampsia and eclampsia
- Sleep apnoea
- Dysfunctional labour
- Shoulder dystocia
- Fetal macrosomia
- Caesarean section – risk increases with higher BMI categories
- Pre-eclampsia
- Thrombo-embolic disorders
- Post- partum haemorrhage

- Postnatal infections
- Anaesthetic risks- difficulty with cannulation/ Regional anaesthesia, increased morbidity/ mortality with GA
- IOL – risk increases with each unit rise in BMI

Neonatal

- Stillbirth – especially intrapartum stillbirth
- Early neonatal death
- Increased birth weight
- Neural Tube defects in spite of Folic Acid supplements
- Hypoglycaemia
- Meconium aspiration
- Child adiposity
- Lower breastfeeding rates

The MBBRACE –UK report (2015)[13] reported that obesity may be independently associated with higher odds of dying from specific pregnancy complications and identified that 30% of women who died were obese and 22% were overweight**.**

The World Health Organisation (WHO 2015[5]) classification of obesity will be used in this document:

$$\mathrm{BMI} = \frac{weight\ (\mathrm{kg})}{height^2 (\mathrm{m}^2)}$$

WHO classification of obesity			
	Popular description	BMI (kg/m2)	Risk of co-morbidity
Underweight	Thin	< 18.5	Low
Normal	Normal	18.5-24.9	Average
Overweight	**Overweight**	25-29.9	Increased
Obese class 1	**Obese**	30-34.9	Moderate
Obese class 2	**Obese**	35-39.9	Severe
Obese class 3	**Morbidly obese**	40-40.9	Very severe
Super obese		50-50.9	
Super super obese		>60	

All women should have their weight and height measured using appropriate equipment. BMI should be calculated and documented in the maternal records for all women at booking. This includes the maternal hand held notes, the booking risk assessment for filing in the main hospital records and the maternity data system Euroking.

Antenatal Care

All women regardless of BMI should be booked early with a midwife to ensure appropriate risk assessment is undertaken and identification of risk factors, enabling referral onto appropriate care pathways. Address the issue of obesity with the woman and discuss explicitly the complications associated with a raised BMI.

Offer the woman personalised advice on healthy eating and physical activity (NICE, 2010[6]) highlighting that significant weight loss is not recommended.
Please see the following for pathway recommendations:

Pathway for ALL women whose BMI ≥30 at booking

	Action	Rationale
Booking Appointment Information and Actions		
1.	The midwife should establish a rapport with the woman as early as possible.	To sensitively discuss BMI/weight with the woman and empower her to actively engage in her plan of care
2.	Accurate height and weight measurements are taken for all women and the BMI calculated ideally before 10 weeks gestation.	To obtain an accurate baseline measurement.
3.	An appropriate sized blood pressure cuff should be used when measuring blood pressure at the booking visit and all subsequent antenatal consultations. The cuff size used should be documented in the medical records.	To obtain accurate blood pressure recordings.
4.	Arrange a dating scan and discuss the anomaly scan highlighting to the woman that some problems may be experienced identifying all aspects of the baby's anatomy due to raised her BMI	To provide fully informed information

5.	Advise the woman that an oral glucose tolerance test (OGTT) at 26 weeks is recommended and arrange the appointment. If the woman has previously had gestational diabetes, then care should be discussed with the diabetes specialist nurse/midwife at booking to arrange either early self-monitoring of blood sugars by 12-16 weeks or an early OGTT as soon as possible after booking, with a follow-up at 26 weeks if the first result is normal	To identify women with diabetes at the earliest opportunity ensuring women receive additional care and support (NICE, 2015[7])
6.	Complete antenatal risk assessment tool which includes thrombosis risk assessment.	Maternal obesity (all classes) is associated with significant risk of thromboembolism as well as other complications of pregnancy.
7.	All women should be offered ante natal screening for chromosomal anomalies, with counselling.	Some forms of screening for chromosomal anomalies are slightly less effective with a raised BMI.
8.	Discuss place of birth Women should be given and signposted to evidence based information to inform their choice.	Consideration and support has to be given to a women's choice for place of birth. All the available evidence should be considered when balancing risks and advantages of possible places for the birth of the baby in different care settings.
9.	Ensure that healthy start vitamins have been commenced. **High dose (5mg) of Folic Acid is** recommended up to 13 weeks. (RCOG 2018[4]) Advise to obtain from GP. Send standard letter to GP **(Appendix 5)**	Evidence suggests that women with a high BMI are less likely to receive folate through their diet. They are also at increased risk of Neural Tube Defects.
10.	A Healthy Start supplement of **Vitamin D 10 micrograms daily** is recommended during pregnancy and while breastfeeding. (NICE 2014b[8])	To achieve optimal Vitamin D status for pregnancy and breastfeeding.

11.	Women with more than 1 moderate risk factor BMI 35 or greater, first pregnancy, maternal age more than 40, family history of pre-eclampsia and multiple pregnancy are recommended to take 150 mg aspirin daily from 12 weeks gestation until birth of the baby. Send standard letter to GP (**Appendix 6**) Women who develop hypertensive complications should be managed according to local guidelines Obs 27 and Obs 99.	Women with BMI of 35 and greater have an increased risk of pre-eclampsia (RCOG 2018[4])
12.	Complete ante natal risk assessment tool, document the management plan on page 15 of the HHNs, in addition women with a **BMI 35** or over must have a completed Personalised Plan of Care and attach to HHNs.	These documents ensure a full needs and risk assessment at antenatal booking.
BMI ≥35 at booking – additional information		
13.	Women should be informed that the pregnancy carries higher risks when the BMI is in this category (Class 2 Obesity and above) Clearly document 'High Risk' status in hand held notes and electronically within the Euroking system. Referral is made to a consultant obstetrician and a clear plan of care outlined. This will usually be a pattern of shared care.	To ensure women's understanding of BMI classification and it is important to keep women fully informed regarding important issues likely to affect their care To make contemporaneous records and allow easy identification of 'High Risk' status to other care givers. Due to the High Risk nature of the pregnancy (RCOG 2018[4])
14.	Women with a BMI >35 should be advised to give birth in a consultant led obstetric unit with appropriate neonatal services. (NICE Guideline No 190)[9].	These women are at significantly higher risk of shoulder dystocia and postpartum haemorrhage. Babies born to these mothers are 1.5 times more likely to require neonatal intensive care

BMI ≥40 additional information and care		
15.	Women should also be informed of further weight / BMI calculations in third trimester; by 36 weeks	To offer weight management support if not previously accessed for remainder of pregnancy, to ensure equipment is in place if needed for delivery and for accurate drug calculations e.g. pain relief, thromboprophylaxis
16.	**Anaesthetic risks** Women with a booking BMI ≥ 40, or body weight ≥ 120 kg must be given the information leaflet "Anaesthetics and pregnant women with a high BMI" from Labour Pains.com https://www.labourpains.com/assets/_managed/cms/files/A4%20High%20BMI%20Leaflet.pdf **All women with a BMI of 40 or over must be referred for an anaesthetic review**	Women with a BMI ≥ 40 have the highest risk of anaesthetic complications. (RCOG 2018)[4]
17.	Women with a booking BMI 40 or greater should have a documented risk assessment in the 3rd trimester for tissue viability	The risk assessment should be undertaken using a validated scale to support clinical judgement
18.	**Assessment of fetal lie** It may also be difficult to establish lie and presentation. Therefore a careful assessment of presentation of the fetus should be made at 37- 38 weeks gestation. If there is any doubt an ultrasound scan may be required to confirm the presentation	Difficulties can arise due to the palpation of excess layers of tissue making assessment inaccurate. This is to ensure there is an appropriate management of care for delivery
Weight Management and Nutritional Information		
19.	A sensitive and supportive discussion should take place on weight management in pregnancy and importance of healthy diet should take place. Regard should be given to the woman's cultural and social circumstances.	In order to reduce pregnancy risks and to support the woman in making health choices for pregnancy and beyond. (NICE 2010 Guideline 27 'Weight management before, during and after pregnancy'[10])

20.	Support is available for women with a BMI of less than 18.5 via Community Nutrition support: https://www.wwl.nhs.uk/Specialities/a_to_z/c/Community_Dietitians.aspx (Exclusion Hyperemesis, Eating disorders) BMI ≥ 25-30: Women may self refer to the Community Weight Management Service who offer access to Slimming World and exercise classes, this is currently free for 12 weeks and is available to women after 20 weeks gestation. The hub access number is 01942 496 496 **BMI ≥ 30-35, BMI≥ 35-40, BMI ≥40+** Women in this group should be referred to the Specialist Weight Management Service, the midwife can undertake a direct referral (must use nhs.net account) via online word document which has been supplied to all community teams and ante natal services by the SWMS service (see Appendix 2 for example) to: lwfg.swms@nhs.net On receipt of referral the Specialist Weight Management Service will undertake a triage system, they will contact the woman to offer the service and the woman can accept/decline. Feedback will be provided via email by the Specialist Weight Management Service to the referring midwife, who will update Euroking and the HHN's at the next contact.	To inform women of local support services and assist in control of weight gain in pregnancy and to provide ongoing support for weight management throughout pregnancy.
21.	Information about appropriate exercise is given i.e. 30 minutes gentle - moderate exercise, 5 times a week with walking, swimming and local information of aqua natal classes being particularly suitable.	To assess physical activity and encourage maintenance of existing regime where appropriate and encourage mobility activities of daily life.

22.	Pelvic Floor exercises should also be discussed.	Early intervention in pelvic floor muscle training to prevent incontinence and prolapse in later life is particularly important for all women in their first and subsequent pregnancies, combined with other lifestyle advice including weight management. (RCM/CSP 2013)[11]
23.	Information should be provided about the increased risks associated with obesity in pregnancy and childbirth; and that controlling weight gain may reduce these risks.	In order to increase awareness regarding complications and assist women in making necessary life style choices to improve pregnancy outcomes.
24.	Refer to and give Being overweight during pregnancy and after birth RCOG (2018) Women should then be given the opportunity to discuss this information	https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-being-overweight-during-pregnancy-and-after-birth-002.pdf
19/20 week Consultant Clinic Appointment		
25.	Discussion of risks with increasing weight gain including an increased risk of stillbirth.	To ensure informed discussion about possible complications during antepartum, intrapartum and postpartum and to consider management strategies
26.	Reiteration of Health Advice by Obstetric Team –women are to be encouraged to minimise / maintain a healthy weight gain and to encourage women who have declined support to access the Specialist Weight Management Service.	To avoid unnecessary weight gain with emphasis on healthy eating as there are currently no UK guidelines on weight gain in pregnancy
27.	Continuing completion of BMI Personalised Plan of Care	To ensure documentation of continued plan of care and good communication between health professionals
28.	Women with a BMI of 30 or greater who have had a previous caesarean section, should have a decision for VBAC following an informed discussion and consideration of all relevant clinic factors	

29.	Women with a BMI greater than 35 are more likely to have inaccurate FH measurement and should have a request made for serial growth scans at 32, 35, 38 and 41 weeks	However ultrasound measurements of the fetus are difficult in women with increased BMI and accuracy of the measurements is therefore reduced.
28 weeks appointment		
30.	**Fetal surveillance** Serial measurement of fundal height is recommended at each ante natal appointment from 26 weeks gestation. (RCOG 2018)[4] Where external palpation is difficult or unable to assess fetal presentation, ultrasound can be considered.	To predict for a small for gestational age fetus
31.	**Ongoing Thromboembolism Risk Assessment** If a woman requires admission in the antenatal period and is not already having thromboprophylaxis then this should be considered.	Ongoing assessment for thromboembolism risk as per Guideline Obs 18.
36 weeks appointment		
32.	Recalculate BMI and if BMI>40 give the information leaflet "Raised body mass index in pregnancy – anaesthetic considerations" For women with BMI 35 and over midwife to ensure completion of Intrapartum Plan and Bariatric Checklist. This is located within **BMI Personalised Plan of Care Document – (Appendix 1)**	To consider if the woman is at greater risk of anaesthetic complications, review current medication, to accurately measure / supply TED stockings, advise woman of postnatal thromboprophylaxis and provide reassurance and support
33.	Moving and Handling risks must be considered throughout the whole care pathway but particularly when considering labour and delivery	To consider safe working loads of beds and theatre tables, the provision of appropriate lateral transfer equipment and hoists. (The list of equipment available in the hospital and community is detailed in **Appendices 3, 4)** and/or contacting the Trust's **Equipment Loan Store 01942 77(3522)**

34.	Liaison should take place with the Matron for Delivery Suite by emailing a copy of the above appendices.	To ensure that the appropriate equipment is in place when the woman is admitted.
35.	All with BMI ≥30 should be offered active management of the 3rd stage.	Due to increased risk of PPH.
Induction of labour		
1.	Women with a raised BMI should be informed that they are at an increased risk of stillbirth. Induction of labour at term should be discussed with women on an individual basis. If macrosomia is suspected IOL may be considered.	Elective induction at term may reduce the chance of a caesarean section without increasing the risk of adverse outcomes. It should however be offered on an individual basis dependent of fetal growth and movements as the overall increased risk of stillbirth is related to other factors than just the BMI
2.	Planned caesarean section should involve a multi-disciplinary approach, taking into the consideration the individual woman's co-morbidities, antenatal complications and her wishes.	A BMI of 50 or greater should not be used as an indication to offer elective caesarean section (NICE 2011)[12]. Discussion should include potential difficulties with performing a grade 1 caesarean section.
3.	It is important to check when offering membrane sweep and post term induction of labour that a mother's BMI has remained within the midwife led care pathway. If BMI >40 recourse to senior obstetrician may be needed.	To ensure an appropriate plan of care is in place.
4.	Planned modes of delivery should aim for delivery during the week in normal working hours.	There is a team of senior personnel readily available during these times
Intra partum Care - BMI ≥35		
5.	When presents in labour ensure completion of Intrapartum section of Personalised plan of care	Ensure documentation of BMI Personalised Plan of Care is completed to aid audit process.
6.	Inform Consultant of admission when in established labour. Registrar grade or above and the shift leader should be available for delivery.	To ensure that the most senior personnel are available should there be an emergency such as shoulder dystocia.

7.	All equipment should be checked to ensure that it meets the woman's needs. Delivery bed to be of adequate size and strength **See Appendices 3 & 4**	To ensure that the correct equipment is ready for use.
8.	Intrapartum fetal monitoring - Guideline Obs 11 should be followed. Consider application of an FSE if there is loss of contact.	In order to obtain a good quality CTG, which might be difficult with external monitoring due to adipose tissue.
9.	Venous access should be established early in labour. BMI 40 or over consider siting 2nd cannula	Establishing venous access in morbidly obese women is more likely to be difficult.
10.	The use of TED stockings in labour unless contraindicated. The woman's calf should be measured if these are used in order to fit the most appropriate size.	Due to the increased risk of venous thrombo-embolism. VTE prophylaxis Guideline Obs 18 to be followed.
11.	Inform the anaesthetist on call of the woman's admission to labour ward.	To obtain early anaesthetic involvement and input. This also allows time for review of Consultant documentation.
12.	The Trust guideline for pressure areas should be followed and care documented. Maternity tissue Viability Risk assessment charts are available on delivery suite to assess all high risk women **(Also available in Intrapartum Guideline Obs 37).**	There is an increased risk of pressure sores when a woman may be relatively immobile and regular inspection of potential pressure areas is important. Contact the WWL Trust Tissue Viability nurse as required.
13.	If LUSCS is required a consultant should make the decision for delivery. Ideally the consultant should be present at the caesarean section. However not all women with a BMI >35 would need this. Therefore a decision by the consultant during the antenatal period can be made and advice documented on the management plan.	In order to provide their support and expertise. Due to the 'high risk' of these cases
14.	The consultant anaesthetist must be informed if surgery is anticipated.	Women with a BMI ≥ 40 have the highest risk of anaesthetic complications.

15.	Be aware of the theatre table weight limit including the fact that it is reduced when carrying out procedures in the lithotomy position. (450kg static, 200kg mobile) Ensure lifting and transfer equipment is available in theatre Refer to **Appendix 3** for safe working load of equipment.	
16.	If LSCS consider the use of a PICO dressing	PICO dressings provide negative pressure which reduces the risk of wound infection. Wound infections are more common in those with high BMI.
Postnatal Care and Follow up		
17.	Early and regular ambulation is encouraged. TED stockings should be offered and worn for the duration of the postnatal stay irrespective of mode of delivery. Guideline Obs 18 should be followed regarding the administration of anti-thrombo-embolic prophylaxis.	To assist in the prevention of venous thrombo-embolic episodes. For continuing monitoring and/or treatment for VTE.
18.	It may be necessary to increase breast–feeding support	Obese women tend to have more difficulty with breast-feeding. Breast feeding can be safely undertaken by women taking Fragmin.
19.	Pressure areas should continue to be managed as necessary. There should be increased vigilance when checking LUSCS wounds. Keeping the wound area as clean and dry as possible should be discussed. Refer to tissue viability nurse if any problems with wound healing.	To reduce the risk of the development of tissue damage. Evidence suggests there is a higher rate of wound infection and slower healing in obese women. Therefore it is important to monitor the wound carefully for signs of infection.
20.	Contraceptive advice should reflect the increased risk of thrombo-embolic disorders	The use of combined oral contraception is contraindicated in women with a BMI >35.

21.	Health professionals should offer on-going support and advice whilst reinforcing health messages and emphasising the health benefits of achieving a healthy BMI. Referral to the Specialist Weight Management Service can also be undertaken postnatally **(**referral form in **Appendix 2)**	To promote health benefits generally as well as for future pregnancies. For continued post-natal support if already accessed service during pregnancy or for new referral if woman decides now feels right time to address weight management

References

1. Health and Social Care Information Centre (HSCIC) **Statistics on Obesity, Physical Activity and Diet** – England 2015, Leeds: Health and Social Care Information Centre
2. Nair M, Knight M, Kurinczuk J **Risk factors and newborn outcomes associated with maternal deaths in the UK from 2009 to 2013: a nation case-control study** BJOG 2016 Sep: 123(10: 1654-1662)
3. Knight M, Kenyon S, Brocklehurst P, Neilson J, Shakespeare J, Kurinczuk J (Eds.) (M-Brrace UK) (2014), **Saving Lives, Improving Mothers' Care Lessons learned to inform future maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009-2012**, Oxford: National Perinatal Epidemiology Unit
4. RCOG **Care of Women with Obesity in Pregnancy** Green Top guideline No 72 2018
5. World Health Organization (WHO) (2015), **Ten Facts on Obesity**, Available online at http://www.who.int/features/factfiles/obesity/facts/en/
6. NICE (2010) **Weight Management, Before, During and after Pregnancy.** NICE Public Health Guidance 27
7. National Institute for Health and Clinical Excellence (2015) **Diabetes in pregnancy: management from preconception to the postnatal period** London: NICE
8. National Institute for Health and Clinical Excellence (2014b) **Vitamin D: increasing supplement use in at-risk groups** London: NICE
9. NICE (Dec 2014) **Clinical guideline No. 190.** Intrapartum care: care of healthy women and their babies during childbirth. London:NICE
10. NICE (July 2010) **'Weight management before, during and after pregnancy'** NICE public health guidance 27.
11. Royal College of Midwives and Chartered Society of Physiotherapy (2013) **'Improving health outcomes for women following pregnancy and birth'** RCM/CSP. Joint statement on pelvic floor muscle exercise 2013.
12. National Institute for Health and Clinical Excellence (2011) *Caesarean section,* London: NICE

13. HQIP (2015). Saving lives, improving mothers' care, MBRRACE-UK report 2015.

Process for audit

- An audit will be undertaken at least every 3 years which will audit compliance with this guideline. The audit will include as a minimum set of standards the following criteria
  - the calculation and recording of the body mass index (BMI) for all women
  - the calculation of the body mass index (BMI) and recording of the BMI in the electronic patient information system
  - all women with a BMI >35 should have an antenatal consultation with a doctor or appropriately trained professional to discuss possible intrapartum complications, the discussion must be documented in the health record and discussed with the woman
  - all women with a booking BMI >40 should have an antenatal consultation with an obstetric anaesthetist and an obstetric anaesthetic management plan for labour and delivery should be documented in the health record and discussed with the woman.
  - the requirement for women with a booking BMI >40 to 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.

- The audit will be presented at a monthly departmental multidisciplinary audit meeting following which an action plan will be formulated to correct any deficiencies identified and a date for re-audit planned.
- The audit recommendations any subsequent action plans will be discussed and agreed at the Maternity Quality Improvement Committee. The Service improvement committee will agree which individuals will be responsible for any actions within a specified timeframe. This will be documented on the action plan and on the Action Matrix within the minutes of the meeting.
- The implementation of the action plan will be reviewed at the monthly audit meeting 3 months after presentation.

Appendix 1

Personalised Plan of Care for those with BMI 35 or above

Wrightington, Wigan and Leigh Teaching Hospitals NHS Foundation Trust

Raised BMI 35 or above: Personalised Plan of Care

Name and hospital number (attach patient label)		
Date of Booking **Gestation**		
EDD: **Gravida** **Para**	**Signature**	**Date**
BMI Weight stabilisation discussed		
Referral to Weight Management Services: Accepted/Declined: further discussion required please document		
VTE risk assessment score……		
TEDS offered / Dalteparin offered (if indicated)		
Vitamin D prescribed		
Aspirin prescribed (in accordance with risk assessment tool)		
High dose folic acid prescribed if Trimester 1		
GTT booked for ☐ 16 weeks ☐ 26-28 weeks		
Anaesthetic referral made		
Growth scans to be performed at ☐ 32 weeks ☐ 35 weeks ☐ 38 weeks and ☐ 41 weeks		

3rd Trimester 34-36 weeks	**Signature**	**Date**
Weight in 3rd trimester ……. kg. If weight ≥160 kg notify maternity ward, , theatres and labour ward so that special equipment is in place.		
Omit Dalteparin if signs of labour (regular contractions, SROM etc)		
Discuss difficulties with EFM in labour and need for FSE.		
Discuss possible delay with category 1 CS which could lead to poor fetal outcome		
Discuss increased risk of PPH and recommend active 3rd stage		

Induction of labour admission plan	**Signature**	**Date**
IOL booked for		
Omit Dalteparin at signs of labour		
BKAS on throughout (The use of appropriately sized and properly applied below knee anti-embolic stockings (**BKAS**)		

Caesarean section admission plan	**Signature**	**Date**
Elective CS booked for		
Book cell salvage on (Monday-Friday only)		
Omit Dalteparin on		
BKAS on throughout procedure		

Intrapartum Care and Management	**Signature**	**Date**
Establish iv access on admission to labour ward		
Epidural / Spinal anaesthetic OK if > 12 hrs from last Dalteparin dose		
BKAS on throughout labour (The use of appropriately sized and properly applied below knee anti-embolic stockings (**BKAS**)		
Continuous EFM in labour for women with BMI>40		

Postnatal Management	**Signature**	**Date**
Start Dalteparin ……		
Continue Dalteparin for □ 7 days □ 6 weeks		
Further comments:		

APPENDIX 2

Happy Mum Healthy Bump

Specialist Weight Management Service Maternity Pathway

(PLEASE COMPLETE IN BLOCK CAPITALS)

REFERRAL DETAILS:

Referral Date: GP Address and Postcode:

Midwife's name (Print & sign):

Community Team (Circle): Ashton Wigan North Wigan South Leigh

SERVICE-USER DETAILS: (apply service-user information sticker if able)

Name:

Address:

TELEPHONE CONTACT DETAILS:

Postcode: Mobile:

D.O.B.: Home:

NHS No:

PREGNANCY DETAILS:

EDD:

Current Gestation:

Previous Pregnancies: Yes □ No □

If yes, please detail any past pregnancy related conditions (e.g. miscarriage, pre-eclampsia, DVT, gestational diabetes, pelvic/back pain):

ESSENTIAL MEASUREMENTS:

Current weight (kg): Height (m): BMI (kg/m2): Blood Pressure:

RELEVANT MEDICAL HISTORY:

EXCLUSIONS **Action**

- Alcohol or drug abuse → Refer to Alcohol & drug services
- Poorly Controlled Major Psychiatric Illness e.g. Bulimia, Psychosis → Refer to Psychiatry
- Hyperemesis Gravidarum → Refer to GP/Consultant and speak with Community Dietitians
- BMI less than 25kg/m^2

Following on from this referral, if you don't decide to engage with the Happy Mum Healthy Bump Service would you be happy for the SWMS team to contact you? This will only be a one off contact to get your feedback on how you feel the service could

be improved and made more accessible to future service users. **Please tick if service user consents to contact** □

For referrals to other Lose Weight Feel Great services please advise the service user to contact 01942 496 496
Please send this referral via email to the 'Lose Weight Feel Great' Specialist Weight Management Service: lwfg.swms@nhs.net

APPENDIX 3

Available Bariatric Equipment

Equipment Type	Safe Working Load	Location
Height measure		Antenatal Clinic/GP Surgeries/Health Centres
Weighing scales	Up to 200kg	Antenatal Clinic/ GP/Surgeries/Health Centre's
Sit in scales		Not available Bariatric beds can weigh patients
Large BP cuffs, for both manual and automated machines		Antenatal Clinic GP/Surgeries/Health Centre's Delivery suite
Heavy Duty Chairs		Antenatal Clinic GP/Surgeries/Health Centre's Delivery
Ultrasound couches	178kg (28 st) 222kg (35 st)	Antenatal Clinic
Examination Couches	178kg (28 st)	Antenatal Clinic GP/Surgeries/Health Centre's Delivery Suite Antenatal DAU
Affinity beds	Up to 227kg (35st)	Delivery Suite
Bariatric Beds	Nightingale up to 349kg (55 st)	Loan Store
Bariatric theatre table	Max weight 300kg (47st) (also wider than standard table)	Delivery Suite Theatre
TEDS	Calf 51cm Calf 66cm (Available via non stock order)	Delivery Suite Maternity ward
Bariatric patient gowns		Labour Ward Maternity ward
Pat slide sheets	No weight limit	Delivery Suite
Hoist	Up to 318kg (50st)	Loan Store
Standard commodes	Up to 159kg (25st)	Maternity Ward/ Loan Store
Heavy Duty Commodes	Up to 254kg (40st)	Loan Store
Heavy Duty Chairs	Extra wide.	Loan Store
Zimmer Frame	350kg (60st)	Physiotherapy
Heavy Duty Wheelchair	254kg (40st)	A&E
Trolley (lifeguard)	248kg (39st)	A&E

Bariatric equipment from other departments can be ordered via the **Loan Store (01942 773522).** In case of problems, contact the Bleep Holder/ Duty Matron. In the event that equipment is not available it should be reported as a clinical incident.

APPENDIX 4

Companies who Rent Bariatric Equipment

For availability contact Loan Store (01942 773522) in hours
Out of Hours Contact Portering Supervisor

Nightingale 01978 661699 (24 hour hire)

Bariatric Bed
Liko Ultra Twin Freespan Gantry Hoist (400kg)
Commode/Shower Chair (318kg)
Wheelchair (318kg)
Walking Frame (318kg)
ProAxis Plus Profiling Bed (318kg)
Bariatric Static chair (318kg)

Huntleigh Healthcare 01582 745777
Contoura 560 Profiling Bed (267kg)
Contoura 1080 Profiling Bed (500kg)
Transfer Chair TC300 (300kg)
Commode (254kg)
Walking Frame (300kg)
Shower Stool (300kg)
Static Armchair (254kg)

Ring only with Management approval

Appendix 5

Letter to GP re folic acid

Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Re:

Date

Dear Dr

The above patient of yours has booked for her Antenatal care today. I have discussed the importance of eating folate-rich foods but also of having a dietary supplementation with folic acid to reduce her risk of having a baby with neural tube defect (anencephaly or spina bifida).

Whilst our advice is normally to take 400 micrograms (µg) daily throughout the first 12 weeks, even if women are already eating foods fortified with folic acid or rich in folate, it is advisable for women to have 5 milligrams of folic acid a day if (midwife please tick)

- She (or her partner) have a neural tube defect □
- She has had a previous baby with a neural tube defect □
- She (or her partner) have a family history of neural tube defects □
- She has diabetes □
- She has epilepsy and taking anti- epileptic drugs □
- She is in the early stages of pregnancy with a booking BMI of 30 or more □

I would be grateful if you will prescribe the higher dose of folic acid for her, having highlighted the risk factor (s) above.

Reference to the following guidelines has been made:- NICE Guideline 11 **Improving the nutrition of pregnant and breastfeeding mothers and children (2008/2014),** NICE Guideline 62 **Antenatal Care (2008/2019)**, NICE Guideline **Diabetes in Pregnancy (2015)** and RCOG Green Top Guideline **Management of Women with Obesity in Pregnancy (2018),** NICE Guideline 137 **Epilepsy Management (2012/2015**)

Thank you

Midwife sign /print

Appendix 6

Letter to GP re low dose aspirin

Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Re:

Date

Dear Dr

The above patient of yours has booked for her antenatal care today. She has an increased risk of developing pre-eclampsia in this pregnancy as she has:

One of the following high risk factors: (please tick)

- Hypertensive disease during a previous pregnancy ☐
- Chronic kidney disease ☐
- Autoimmune disease e.g. systemic lupus erythematosus or antiphospholipid syndrome ☐
- Type 1 or Type 2 diabetes ☐
- Chronic hypertension ☐
- IVF pregnancy ☐
- Previous SGA < 3rd centile ☐
- Thrombocytosis >500x10^9/l ☐

More than one of the following moderate risk factors:

- First pregnancy ☐
- BMI of 35 or more at booking ☐
- Family history of pre-eclampsia ☐
- Age 40 years or over ☐
- Multiple pregnancy ☐
- Pregnancy interval of more than 10 years ☐

We have recommended that she takes **Aspirin 150mg daily** until delivery **starting between 8 and 12 weeks** to reduce the risk of pre-eclampsia and fetal growth restriction (Bujold et al, 2010)

Thank you

Name:

Designation: