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AMENDMENT HISTORY				
Version No.	**Date of Issue**	**Page/Selection Changed**	**Description of Change**	**Review Date**

Does this document meet the requirements of the Equality Act 2010 in relation to Race, Religion and Belief, Age, Disability, Gender, Sexual Orientation, Gender Identity, Pregnancy & Maternity, Marriage and Civil Partnership, Carers, Human Rights and Social Economic Deprivation discrimination? Yes
Document for Public Display: No
Evidence reviewed by Library Services N/a

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WHICH PRINCIPLES OF THE NHS CONSTITUTION APPLY? Click here for guidance on Principles	Tick those which apply	WHICH STAFF PLEDGES OF THE NHS CONSTITUTION APPLY? Click here for guidance on Pledges	Tick those which apply
1. The NHS provides a comprehensive service, available to all.	√	1. Provide a positive working environment for staff and to promote supportive, open cultures that help staff do their job to the best of their ability.	√
2. Access to NHS services is based on clinical need, not an individual's ability to pay.	√	2. Provide all staff with clear roles and responsibilities and rewarding jobs for teams and individuals that make a difference to patients, their families and carers and communities.	√
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7. The NHS is accountable to the public, communities and patients that it serves.	√	7. Encourage and support all staff in raising concerns at the earliest reasonable opportunity about safety, malpractice or wrongdoing at work, responding to and, where necessary, investigating the concerns raised and acting consistently with the Employment Rights Act 1996.	√

WHICH AIMS OF THE TRUST APPLY? Click here for Aims	Tick those which apply	WHICH AMBITIONS OF THE TRUST APPLY? Click here for Ambitions	Tick those which apply
1. To offer excellent health care and treatment to our local communities.	√	1. Consistently deliver excellent care.	√
2. To provide a range of the highest standard of specialised services to patients in Lancashire and South Cumbria.	√	2. Great place to work.	√
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		4. Fit for the future.	√

Diabetes - Screening and management of Gestational and Pre-existing (Types 1 & 2) Diabetes

Gestational Diabetes - Screening

Gestational diabetes: hyperglycaemia with onset or first recognition during pregnancy
Patients with pre-gestational type 1 or 2 diabetes or with known impaired glucose tolerance should be referred urgently to the next combined diabetic clinic for ongoing management. The diabetes specialist midwife should be informed as soon as possible.

The following patients should be screened for gestational diabetes at 24-28 weeks unless otherwise stated:

- GDM in previous pregnancy – these women should be screened as soon as possible after booking and again at 24-28 weeks if the first result is negative
- All women with a family origin indicating a high risk – Asian, Black-Caribbean, Middle Eastern or any mixed race including *one of these:*
- Family history of Diabetes in first degree relative (parent, sibling, child)
- Previous baby >90th centile or birth weight >4.5kg
- History of PCOS
- Women on antipsychotics e.g. Quetiapine
- IVF pregnancy
- Women on triple therapy for HIV
- Women with BMI over 30
- Women with 1+ glycosuria on 2 occasions or 2+ on one occasion (fasting urine) should be screened as soon as practicable when diagnosed unless within four weeks of a normal GTT result. GTT to be performed until due date. If post date refer to consultant clinic. If OGTT normal at less than 20 weeks and glycosuria persists, then a repeat OGTT is warranted at 24-28 weeks. If this remains normal, reassure woman and no further test indicated.

NB Women who have undergone gastric bypass surgery or gastric banding are not suitable for a Glucose Tolerance Test (*GTT) and arrangements should be made for Blood Glucose Monitoring at 26 weeks instead of GTT*.

GTT results review and management
Results must be reviewed by Antenatal Clinic Core/Diabetes Specialist Midwife and the woman telephoned with the result - either the same day as the test or the next working day.

Fasting result	**2 hour result**	**Action**
≥5.6 mmol/L OR	≥7.8 mmol/L	Diabetic specialist midwife or other team member should inform woman of positive result and arrange hospital visit to commence blood sugar monitoring and give dietary advice. If fasting result ≥ 7mmol at diagnosis, Diabetic specialist midwife should contact diabetic team on next working day to consider starting Metformin **Dosage:** Metformin 500mg once a day at teatime for 3 days. Arrange urgent review in next combined clinic. After 3 days, increase to 500mg BD (breakfast

		and teatime)
<5.6 mmol/L AND	<7.8 mmol/L	Resume routine antenatal care – negative result

Antenatal Care (Gestational and Pre-existing)

All women with pre-existing diabetes and women with gestational diabetes should have antenatal care in the combined obstetric diabetic clinic. Women will be advised on monitoring and treatment of diabetes and will be monitored for complications by both the medical and obstetric teams.

Blood glucose monitoring

Advise pregnant women to ideally maintain their capillary plasma glucose below the following target levels, if these are achievable without causing problematic hypoglycaemia (individualised plans may apply)

Fasting: 5.3 mmol/L

1 hour post-meal: 7.8 mmol/L **or** 2 hours post-meal: 6.4 mmol/L

- Advise women with Type 2 or Gestational Diabetes to seek urgent medical advice if they become hyperglycaemic or unwell. If 2 consecutive readings are >10 mmol/L, advise woman to contact the Diabetic Specialist Nurse 01772 777621 (daytime hours). If out of hours contact Delivery Suite 01772 524731/524495. Advise can be obtained from the Medical Registrar on call (bleep 8003)
- Diabetic ketoacidosis can very occasionally occur in women with Type 2 or Gestational Diabetes. Therefore any woman who is hyperglycaemic and unwell should have blood ketones measured.
- Offer women with type 1 diabetes blood ketone testing strips and meter, and advise them to test for ketonaemia and to seek urgent medical advice if they become hyperglycaemic or unwell.

Suspected diabetic ketoacidosis

Gestation	Process
<24 weeks	Admit to Medical Assessment Unit; liaise with Critical Care regarding transfer for level 2 care. Obstetric care should be provided in accordance with Women admitted to Emergency Department or non-gynaecology/non-maternity ward guideline Consider auscultation of the fetal heart - duration and frequency should be guided by the clinical picture.
≥24 weeks	Admit to Delivery Suite, with urgent medical registrar review (bleep 8003). Anaesthetist should be informed (bleep 4154). The nurse outreach team should be contacted if available (bleep 3388) Manage in accordance with the Trust Management of diabetic ketoacidosis in adult's guideline. Pregnant women with unstable blood glucose measurements will need one to one care and should be only transferred to the maternity ward when they no longer need one to one care. Fetal monitoring should be in accordance with the Antenatal Fetal Heart Rate Monitoring guideline and also be guided by the clinical picture.

Gestational and Type 2 Diabetes* - Intrapartum blood glucose management

During established labour - hourly blood glucose monitoring should be performed during established labour.

Administer Ranitidine - 150mg orally, 8 hourly

Unless Nil By Mouth - consider a low residue diet, such as biscuits and toast or carbohydrate rich drinks such as maltodextrate (Polycal)

Do not give pre-load carbohydrate drink

<table>
<tr><th rowspan="2">Diabetes control method</th><th rowspan="2">Maintaining blood glucose</th><th colspan="3">Actions according to blood glucose level</th></tr>
<tr><th>≤ 4 mmol/l</th><th>> 4mmol/l and ≤ 7mmol/l</th><th>> 7mmol/l on two consecutive readings or >8mmol on one reading</th></tr>
<tr><td>Diet only</td><td>May eat, unless other indication</td><td rowspan="2">No additional action required; women not on insulin will not become significantly hypoglycaemic</td><td rowspan="3">No additional action required.</td><td rowspan="3">Start Diabetes - Continuous IV insulin administration in labour regime. Commence with sliding scale A</td></tr>
<tr><td>Diet and Metformin</td><td>Stop Metformin.
May eat, unless other indication</td></tr>
<tr><td>Insulin (with or without Metformin)</td><td>Stop subcutaneous insulin and Metformin (unless Intrapartum management plan suggests otherwise) May eat (light diet) and drink unless contraindicated. If NBM, commence Diabetes - Continuous IV insulin administration in labour. Commence with sliding scale A.</td><td>Start Diabetes – Continuous IV insulin administration in labour regime. Commence with sliding scale A</td></tr>
<tr><td>Elective caesarean section</td><td>Stop Metformin day prior to surgery (last dose no less than 24 hours prior to surgery). If on insulin admit evening prior to surgery. Continue usual diabetic diet and any subcutaneous insulin until fasting, usually midnight.</td><td>If not on insulin no additional action required

If on insulin refer to Hypoglycaemia pathway and once blood glucose >4mmol/L commence Diabetes – Continuous IV</td><td>No additional action required</td><td>Start Diabetes – Continuous IV insulin administration in labour regime. Commence with sliding scale A</td></tr>
</table>

		insulin administration in labour regime. Commence with sliding scale A		
Emergency caesarean section	If already on continuous IV insulin continue. It not check blood glucose and take action as per guideline.	*As per elective caesarean section.		
After delivery	Gestational diabetes	If continuous IV insulin has been used, discontinue once placenta has delivered. Check blood glucose during the first hour after discontinuing insulin, ideally at 30 and 60 minutes to ensure not hypoglycaemic. If on SC insulin this should be stopped.		
	Type 2 diabetes **not** requiring insulin post partum (refer to post birth management plan in orange notes – page 13)	If continuous IV insulin has been used, discontinue once placenta has delivered. Check blood glucose after the first hour after discontinuing insulin, ideally at 30 and 60 minutes to ensure not hypoglycaemic. Start post-delivery treatment as indicated in post birth management plan in orange notes.		
	Type 2 diabetes requiring insulin post partum (refer to post birth management plan in orange notes – page 13	Treat as per type 1 diabetes (see below)		

Type 1 Diabetes * Intrapartum and post-partum blood glucose management

Unless Nil By Mouth, consider low residue diet - biscuits and toast or carbohydrate rich drinks (maltodextrate - Polycal)

Stage	Management
Prior to established labour	Continue usual diabetic diet, subcutaneous Insulin and Metformin, if prescribed, and blood glucose monitoring. Encourage the woman to eat and drink. Women on insulin in early labour should be advised contact and attend Delivery Suite for early assessment
During established labour	Stop any subcutaneous Insulin and Metformin. Start Diabetes - Continuous IV insulin administration in labour regime. **Patients on PUMP** – refer to pump guideline Hourly blood glucose monitoring; if blood glucose < 4mmol/l follow Hypoglycaemia pathway. If > 7 mmol/L, refer to woman's continuous IV insulin administration regime. Administer Ranitidine 150mg orally, 8 hourly
Elective caesarean section	Stop Metformin day prior to surgery (last dose no less than 24 hours prior to surgery). Admit evening prior to surgery. Continue usual diabetic diet and any subcutaneous insulin until fasting, usually midnight. Commence Diabetes - Continuous IV insulin administration in labour on morning of surgery, usually at 08:00. Do **not** give pre-load carbohydrate drink

Emergency caesarean section	Stop any subcutaneous insulin and Metformin. If not already in progress, commence hourly blood glucose monitoring and Diabetes - Continuous IV insulin administration in labour when decision for caesarean section made.	
After delivery	**Situation**	**Action**
	No general anaesthetic	Continue continuous IV insulin administration regime (set insulin to sliding scale A (**after the delivery of the placenta**) and hourly blood glucose monitoring until 30 minutes after eating. After caesarean section (particularly with epidural anaesthesia) insulin requirements may be temporarily lower for 24-48 hours.
	Received a general anaesthetic	Blood glucose monitoring should be performed half-hourly until fully conscious and then continue hourly blood glucose monitoring until the woman has eaten
	Prior to eating	Post-delivery insulin should be administered, as prescribed on the Insulin prescription and blood glucose monitoring form. If not prescribed, contact Perinatal diabetes team (office hours); out of hours Medical Registrar (8003) or via switchboard. If unable to ascertain plan for post-delivery treatment, refer to pre-pregnancy treatment in the 'Medication' section of the Diabetes in Pregnancy notes; post-delivery dosages are usually similar to pre-pregnancy dosages.
	Type 2 diabetes treated with only oral hypoglycaemics	**Stop IV insulin administration after the delivery of the placenta**. Post-delivery treatment should be detailed in the individualised management plan in the Diabetes in Pregnancy hand held notes
Postnatal	Post-delivery insulin and usual blood glucose monitoring should continue indefinitely, the management plan should be available in the Diabetic notes under the section 'pre-delivery'. Arrange, ideally before discharge from hospital, follow-up appointment with Perinatal diabetic team around six weeks postnatal, (unless indicated otherwise).	

***If unsure whether woman has Type 1 or Type 2 Diabetes, treat as Type 1 Diabetes**

Postnatal follow-up	
Gestational diabetes	A pre-meal blood glucose test should be offered before discharge from hospital; if > 7mmol/l, the Diabetes team should be informed. A 6 week Fasting Plasma Glucose Test should be arranged, ideally before discharge from hospital; a follow-up appointment with the Perinatal Diabetic team should be arranged if fasting BG>5.9mmol/l. If fasting BG <6.0mmol/l then send standard letter.
Type 1 and Type 2 Diabetes	See 6 weeks postpartum in diabetes pregnancy clinic

Care of newborn

Refer to 'Newborns at high risk of developing hypoglycaemia' section in Immediate care of the Newborn. Metformin and Glibenclamide are the only oral hypoglycaemics suitable for breastfeeding.

References:

- National Institute for Health and Clinical Excellence (2015). *Diabetes in pregnancy: Management of diabetes and its complications from pre-conception to the postnatal period.* London: NICE.
- CMACE/RCOG Joint Guideline (2010) *Management of Women with Obesity in Pregnancy* London: RCOG
- Smith I, et al (2011) Perioperative fasting in adults and children: guidelines from the European Society of Anaesthesiology Eur J Anaesthesiol; 28:556-569

Appendix 1

Lancashire Teaching Hospitals
NHS Foundation Trust

Equality, Diversity & Inclusion Impact Assessment Form

Department/Function	Women's Health			
Lead Assessor	Sue Wylie / Simon Howell			
What is being assessed?	Diabetes - Screening and management of Gestational and Pre-existing (Types 1 & 2) Diabetes			
Date of assessment	14/06/2018			
What groups have you consulted with? Include details of involvement in the Equality Impact Assessment process.	Equality of Access to Health Group	☐	Staff Side Colleagues	☒
	Service Users	☒	Staff Inclusion Network/s	☒
	Personal Fair Diverse Champions	☐	Other (Inc. external orgs)	☐
	Pharmacy, Medicine, Anaesthetics, Scanning, NICE Guidelines and RCOG			

1) What is the impact on the following equality groups?			
Positive: ➢ Advance Equality of opportunity ➢ Foster good relations between different groups ➢ Address explicit needs of Equality target groups		**Negative:** ➢ Unlawful discrimination, harassment and victimisation ➢ Failure to address explicit needs of Equality target groups	**Neutral:** ➢ It is quite acceptable for the assessment to come out as Neutral Impact. ➢ Be sure you can justify this decision with clear reasons and evidence if you are challenged
Equality Groups	**Impact** (Positive / Negative / Neutral)	**Comments:** ➢ Provide brief description of the positive / negative impact identified benefits to the equality group. ➢ Is any impact identified intended or legal?	
Race (All ethnic groups)	Neutral		
Disability (Including physical and mental impairments)	Neutral		
Sex	Neutral		
Gender reassignment	Neutral		
Religion or Belief (includes non-belief)	Neutral		
Sexual orientation	Neutral		
Age	Neutral		

Marriage and Civil Partnership	Neutral	
Pregnancy and maternity	Neutral	
Other (e.g. caring, human rights, social)	Neutral	

2) In what ways does any impact identified contribute to or hinder promoting equality and diversity across the organisation?	

3) If your assessment identifies a negative impact on Equality Groups you must develop an action plan **to avoid discrimination and ensure opportunities for promoting equality diversity and inclusion are maximised.**

- This should include where it has been identified that further work will be undertaken to further explore the impact on equality groups
- This should be reviewed annually.

ACTION PLAN SUMMARY

Action	Lead	Timescale