NORTH WEST MATERNAL MEDICINE NETWORK
Lancashire & South Cumbria
Cheshire & Merseyside
Greater Manchester & Eastern Cheshire

NHS North West

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NORTH WEST GUIDELINE

Diabetes in Pregnancy

Document Control

Role	Name	Contact
Owners	North West Maternal Medicine Network (MMN) North West Coast SCN Greater Manchester and Eastern Cheshire SCN	

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2.	
3.	

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Conflict of Interest

None declared.

We are committed to serving and respecting all maternity service users, most of whom are women. The language we use reflects that but will also be varied where appropriate to recognise and affirm diverse gender identities. Best practice in inclusive language is evolving and we will strive to ensure it communicates as effectively as possible with service users and stakeholders.

So in this guideline you will see that we will always use women but we will use gender neutral language in addition as well in some of our communications when appropriate. We will ensure that we live up to the commitments made in our statement because ultimately ensuring our members, women and people who use maternity services feel that they belong is the right thing to do."

Abbreviations/Acronyms used throughout this guideline:

ACR	Albumin Creatinine Ratio
BGM	Blood Glucose Monitor
BMI	Body Mass Index
BP	Blood Pressure
CBG	Continuous Blood Glucose
CGM	Continuous Glucose Monitoring
CSII	Continuous Subcutaneous Insulin Infusion
DKA	Diabetic Ketoacidosis
DSM	Diabetic Specialist Midwife
DSN	Diabetic Specialist Nurse
EFW	Estimated Fetal Weight
EMI	Electromagnetic Interference
FGR	Fetal Growth Restriction
IOL	Induction of Labour
IV	Intravenous
LMNS	Local Maternity and Neonatal Systems
MDI	Multiple Daily Injections
MDT	Multidisciplinary Team
MMC	Maternal Medicine Centre
MMN	Maternal Medicine Network
PCR	Protein Creatine Ratio
PlGF	Placental Growth Factor
SBL	Saving Baies Lives
SC	Subcutaneous
TIR	Time in Range
UPCR	Urinary Protein Creatine Ratio
VTE	Venous Thromboembolism
VRIII	Variable Rate Intravenous Insulin Infusion

Contents

1 Diabetes in Pregnancy North West Maternal Medicine Network

The North West Maternal Medicine Network (NW MMN) is responsible for ensuring that all women with significant medical problems in the network's footprint receive timely specialist care and advice before, during, and after pregnancy. All constituent providers within the network must be responsible for agreeing and upholding shared protocols on the management and referral of women with medical conditions, including reviewing guidelines and referral pathways. This model of care will ensure that – where agreed appropriate – investigation and management is carried out by an experienced Multidisciplinary Team (MDT).

Most women with pre-existing medical conditions and complications during pregnancy will continue to be managed by local maternity services. The proportion of a woman's care delivered by a Maternal Medicine Centre (MMC) will vary according to individual need. For some women, a single visit to the MMC or communication with the MMC by the local unit will suffice. For the highest risk and most complex women it may be that all care will be recommended to be delivered within the MMC.

When referring women, be respectful and aware of individuals' religions, languages, cultures and diversities to ensure best care for all people. Please take into consideration the additional challenges faced by those who are from an ethnic minority, have a severe mental illness or are socially deprived as they are at a higher risk of poor physical health and poor outcomes, compared with the general population. The perinatal period adds further complexity, therefore ensure that mental health needs are considered and appropriate referral to local perinatal mental health service is made.

2 Introduction and Scope

Women with pre-existing diabetes are at an increased risk of obstetric and neonatal complications. Multidisciplinary care significantly improves pregnancy outcomes.

Diabetes describes a variety of 'types' of diabetes that effect carbohydrate metabolism and blood glucose levels. They require management including insulin, oral medications and modifications to diet and lifestyle. They are associated with long-term complications (including neuropathy, nephropathy, retinopathy, and vascular disease). Diabetes is the most common pre-existing medical disorder affecting pregnancy.

Diabetes in pregnancy is associated with increased risks to the woman, developing fetus and neonate compared to non-diabetic pregnancies. Miscarriage, pre-eclampsia, preterm births and caesarean section are more common in women with pre-existing diabetes. Women are at an increased risk of diabetic ketoacidosis, hypoglycaemia, worsening retinopathy and nephropathy. Congenital malformations, stillbirth, macrosomia, birth trauma, perinatal mortality, neonatal death, neonatal hypoglycaemia, and jaundice are more common in the babies of women with diabetes.

The National Pregnancy in Diabetes Report (2023) suggests women with diabetes are poorly prepared for pregnancy. Preconception care has been shown to significantly reduce adverse outcomes in women with pre-existing diabetes.

Optimisation of blood glucose levels both prior to and during pregnancy reduce the risks of all adverse pregnancy and neonatal outcomes (NICE 2015).

3 Diabetes Services within NW MMN

The NW MMN underpins the guidance for lead providers of maternity care for women with diabetes in pregnancy across the region. It also supports a maternity tertiary care service for women with complex diabetes across the three North West Local Maternity and Neonatal Systems (LMNS). The designated MMCs are based at St Mary's Hospital Manchester, Liverpool Women's Hospital and Royal Preston Hospital and encompasses all maternity providers within the three localities (Appendix 1)

The role of the network is to ensure robust pathways are in place and local teams are confident they are supported through the MMC/MDT referral and discussion process.

MMCs play a crucial role in enhancing the quality of care for pregnant individuals with complex diabetes needs. At the core of their function is the coordination of MDT meetings and ensuring a collaborative and comprehensive approach to care. The MDT coordinator within the MMC serves as a key link, facilitating the arrangement of MDT meetings and ensuring the involvement of relevant professionals. Following these meetings, the MMCs are responsible for disseminating the care plan formulated by the MDT, promoting a unified and well-coordinated approach to the management of complex cases. In instances where the maternal condition deteriorates post-MDT discussion, prompt re-evaluation through another MDT meeting is recommended.

To streamline these processes, it is advised that MMCs work towards developing a regional directory of experts in each specialty that is linked with diabetes complications, fostering robust connections and relationships that strengthen the network of care. By establishing these links, MMCs contribute significantly to the overall efficacy and responsiveness of healthcare delivery for pregnant women with complex diabetes.

There are designated maternal medicine clinics that specialise in Diabetes in pregnancy based within the following MMCs:

Table 1: MMC Diabetes Clinics

MMC	Obstetrician	Diabetologist	Frequency
St Mary's Hospital, Manchester	Professor Jenny Myers Dr Kim Macleod Dr Emma Shawkat	Dr Clare Mumby	Weekly Tues
Liverpool Women's Hospital	Dr Dyan Dickins Dr Mark Clement-Jones Dr Naomi McGuinness Dr Emma McGoldrick	Dr Sabnam Samad Dr Emily Brown Dr Neil Kelly Dr Tej Purewal Dr Dhanya Kalathil Dr Deepa Beeharry	Weekly Tues
Royal Preston Hospital	Dr Charlotte Cox Dr Nicola Loster	Dr Simon Howell	Weekly Tues

4 Pre-pregnancy Counselling and Support

The importance of avoiding unplanned pregnancy should be part of education for individuals with diabetes from paediatrics through transition to adult services. All women with diabetes should receive preconception advice.

In any routine diabetes review, discuss with women their pregnancy intentions and express the importance of contraception and the avoidance of unplanned pregnancy.

Women contemplating pregnancy should have access to a secondary care diabetes team for assessment if:

- Type 1 Diabetes
- Type 2 Diabetes with HbA1c >48 mmol/mol or requiring adjustment to treatment regime ahead of pregnancy
- Medical co-morbidities
- The need for support beyond what is available in the primary care setting.

Women should be offered a structured education programme if they have not already attended one (e.g. DESMOND/DAFNE).

4.1 Diabetes technology for women with Type 1 Diabetes

There is good evidence that pregnancy outcomes are optimised for women with Type 1 diabetes where continuous glucose monitoring (CGM) and continuous subcutaneous insulin infusion (CSII) and hybrid closed loop technology are used. Hybrid closed loop systems are recommended as an option for managing blood glucose levels in type 1 diabetes for women who are pregnant or planning to become pregnant (NICE TA943).

Diabetes teams providing care for women of childbearing age should be supported to develop their services such that these technologies can be offered to all women by the local team in the preconception period and in pregnancy. Where these services have not yet been established, the offer of technology should not be withheld from women and support should be sought form local services that already have this provision.

Offer CGM to all women with type 1 diabetes (NICE QS 208)

The preconception period offers the opportunity to consider the introduction of CSII and closed loop systems. The CAM APS system is currently the only hybrid closed loop system licensed in pregnancy; this should be resourced and considered in line with the woman's preferences.

The following tasks should be considered during all preconception reviews:

- The importance of avoiding unplanned pregnancy and advice about contraception and where to access this (see section 9).
- Advise women with an HbA1c above 86mmol/mol not to get pregnant and to use reliable contraception.
- Target HbA1c below 48mmol/mol if safe to do so without problematic hypoglycaemia. All reductions in HbA1c may reduce risks for both mother and baby (NICE 2015).
- The use of reliable contraception until HbA1c below 48mmol/mol if safe to do so without

problematic hypoglycaemia, ideally for three consecutive months prior to conception.

- In type 1 diabetes and women who have completed structured education in the past, consider referral to dietician or carb counting refresher.
- For women using continuous glucose or flash monitoring aim for time in range ~70% (non-pregnancy range 3.9-10 mmol/L).
- Advise women with type 2 diabetes to test capillary blood glucose (CBG) levels at least 4 times a day pre and post meals.

Home blood glucose targets:

- Fasting plasma glucose level of 5–7mmol/L on waking
- Plasma glucose level of 4–7mmol/l before meals at other times of the day
- Plasma glucose level below 9mmol/l at 2 hours after meals

- Advise women regarding the signs of hypoglycaemia and the increased risks of hypoglycaemic unawareness.
- Glucagon should be provided for women with type 1 diabetes.
- Provide dietary and lifestyle advice and advise weight loss if their BMI is >27kg/m^2 with referral to a dietitian.
- Review ACE inhibitors, statins and other medications and document a plan for the preconception period.
- Provide a blood ketone testing meter and advise people regarding testing for ketones if hyperglycaemic or unwell. Provide details of who to contact in the pre-conception period if concerns with the above arise.
- Offer metformin for the treatment of type 2 diabetes. All other oral hypoglycaemic agents should be reviewed before pregnancy.
- Commence insulin for women with type 2 diabetes where target blood glucose is not achieved with metformin treatment alone or where metformin is not tolerated.
- Check HbA1c as appropriate.
- Prescribe folic acid 5mg daily for all women with diabetes who are at risk of conception in the next 3 months and continue until 12th completed week of pregnancy.
- Advise on smoking and alcohol cessation.
- Advise a retinal assessment by digital imaging (unless performed within the previous 6 months).
    - Women with active retinopathy, previous history of proliferative retinopathy or unknown retinopathy status should be advised against pregnancy until an up to date review by their ophthalmologist. Refer to an Ophthalmologist as soon as possible.
- Review blood pressure medications and optimise blood pressure (≤140/90).
- Assess renal function; urinalysis for proteinuria, albumin creatine ratio (ACR) or urine protein creatine ration (UPCR), blood for urea and electrolytes, creatinine, and albumin.

Women with advanced diabetic nephropathy (e.g. creatinine > 120µmol/l and/or proteinuria >3g per day (~PCR ≥300 mg/mmol) should be referred to the MMC for additional preconception preparation and counselling.

- Check blood tests for thyroid function, vitamin B12 deficiency, vitamin D deficiency and full blood count.
- Provide women contacts for the diabetes in pregnancy team and advise women to contact the diabetes specialist midwife (DSM) /diabetes specialist nurse (DSN) /diabetologist as soon as they suspect they are pregnant and offer an appointment (virtual/face-to-face as required) within a week of contact.

5 Termination of Pregnancy

Rapid access to termination of pregnancy services should be facilitated if, for whatever reason, a woman opts for this. Multidisciplinary care will be necessary for some women around the time of termination of pregnancy. For women with complex diabetes, it is important that the termination occurs in an NHS hospital setting. Clinicians should recognise the difficulty in making these types of decisions and be supportive of a decision to abort in the context of diabetes.

6 Miscarriage

The care of women who have a miscarriage requires a multi-disciplinary approach, including the appropriate diabetologist, gynaecologist and anaesthetist. The multidisciplinary team should decide the best place and method for management of the woman having a miscarriage. There are a variety of management options which are all appropriate to be considered for women with diabetes.

7 Antenatal Care

7.1 SBL Element 6 Recommendations for Practice: One Stop clinic

Care must be delivered in line with Saving Babies Lives Care Bundle v3 (2023). Guidance on the requirements of the service are included in Appendix 2 and a service time allocation calculator are included in Appendix 3.

All services should follow a model which has a separate weekly clinic for women with type 1 and 2 diabetes where the holistic needs of women can be met.

Even for services with <10 people per year, there is sufficient to fill a weekly session for women with pre-gestational/first trimester diagnoses of diabetes – the clinical session should combine face-to-face visits, telephone reviews and MDT discussions for high risk women.

The multidisciplinary clinic should aim to address all healthcare needs to reduce the need for women to have multiple appointments with different teams. Examples include management of hypertension, thromboprophylaxis, social support, midwifery and breastfeeding support.

Maternity units should determine the relative contribution of different health care professionals

based on local skill mix, but ideally the service should include:

- An obstetrician with expertise in the management of diabetes/maternal medicine
- A diabetologist with expertise in diabetes in pregnancy
- A diabetes specialist nurse who has expertise in diabetes in pregnancy care and who is competent in the use of the diabetes technologies currently being offered within their service
- A diabetes specialist midwife who has expertise in the management of diabetes in pregnancy
- A dietician or staff member adequately trained to support dietary advice

The diabetes in pregnancy clinic should be underpinned by the principle of continuity of midwifery care embedded within the service.

7.2 Early referral

7.2.1 Diabetes technology for women with Type 1 Diabetes

There is good evidence that pregnancy outcomes are optimised for women with Type 1 diabetes where CGMS and CSII and hybrid closed loop technology are used. Diabetes teams providing care for women of childbearing age should be supported to develop their services such that these technologies can be offered to all women by the local team either in preconception or in early pregnancy. Where these services have not yet been established, the offer of technology should not be withheld from women and support should be sought form local services that already have this provision. The CAM APS system is currently the only hybrid closed loop system licenced in pregnancy; this should be resourced and considered in line with the woman's preferences.

Women should be referred urgently as soon as pregnancy is confirmed to a member of the MDT at their local unit.

All women should be given an appointment (virtual/face-to-face as required) within a week of initial contact.

All women with pre-gestational diabetes should receive their ongoing antenatal care from a multidisciplinary team in a dedicated clinic able to address their holistic needs throughout pregnancy. Appointments to other services should be minimised as much as possible. Appointments outside of the pre-gestational diabetes clinic should be reserved for appointments with external specialist services which cannot be delivered within a single MDT clinic (e.g. specialist perinatal mental health service, tertiary cardiology services, ophthalmology)

Effective communication with women before and during clinic appointments is paramount. Providing clear information about their condition and what to expect at appointments helps empower them in their pregnancy journey. Additionally, emphasising the importance of traveling safely and managing expectations regarding regional travel for appointments ensures a smoother experience. Transparent communication fosters trust, reduces anxiety, and enables women to actively participate in their care, promoting a positive and supportive healthcare environment.

Women with complex diabetes in pregnancy, regardless of booking site should be referred to a

complex diabetes clinic at their local MMC at the earliest opportunity for discussion and MDT plan of care (Appendix 4).

All women with diabetes should be risk stratified using the below table which is based on the MMN National Specification. It should be noted that for this guideline alone, the nationally agreed classification of maternal medical conditions, A, B, C, has been adapted to align with local services. Table 2 provides guidance as to when referral or advice from the MMC is recommended.

Category A (Local Expertise)	Category B (Notification and /or discussion with the MMC)	Category C (Care led by MMC)
GDM	Diabetic nephropathy – Creatinine >70 µmol/l or PCR >30 mg/mmol	Diabetic nephropathy – creatinine >120 µmol/l or PCR >300 mg/mmol
Type 1 and 2 Diabetes without complications or co-morbidities	Diabetic retinopathy requiring treatment during pregnancy (where local ophthalmology services are not providing treatment)	Complex diabetic retinopathy requiring treatment (significant nephropathy likely to coincide)
	Autonomic neuropathy causing significant complications eg. gastroparesis	Cardiovascular complications e.g. Congenital or acquired cardiac diseases, Cerebrovascular diseases, Resistant hypertension

Table 2: MMN Specification for Diabetes in Pregnancy

All women with pre-gestational diabetes should have contact numbers/email contact provided to ensure access to members of the MDT during the working week who can advise and support their blood glucose management.

7.2.2 At the first appointment with both Obstetric and Diabetes specialists

Women with Type 1 diabetes already on CGM, CSII or hybrid closed loop technology should be CONTINUED in pregnancy. The CAM APS system is currently the only hybrid closed loop system licenced in pregnancy; where appropriate, this should be resourced and considered in line with the woman's preferences.

CGM should be offered to all women with Type 1 diabetes during pregnancy as per NHS England (2020). CGM should be set up within 2 weeks of the first contact.

CGM should also be considered and offered for women with type 2 diabetes who are using basal bolus insulin (GMMMG Feb 2021) or if there are significant barriers to achieving blood glucose targets with finger prick testing.

If finger prick testing is continued without CGM, women must be advised of the importance of bringing their meter to each antenatal appointment to enable downloading of blood glucose measurements. **CGM can be considered and offered again at any time.**

ACE inhibitors and statins should be stopped if this has not been done already.

Hypertension (≥140 and/or ≥90 mmHg) should be treated with agents considered to be safe in pregnancy. NICE supports the off-label use of Nifedipine, Labetalol, Amlodipine and Methyldopa. As per NICE Hypertension in Pregnancy guidelines, target BP is 135/85 mmHg. Women should be encouraged to supplement clinic blood pressure (BP) monitoring with home BP monitoring using a validated digital device.

Metformin should be offered to women with type 2 diabetes. All other oral hypoglycaemic agents should be discontinued.

If not prescribed in the preconception period, prescribe folic acid 5mg daily for all women until 12 completed weeks of pregnancy.

Check HbA1c level to assess associated risks in pregnancy.

Check full blood count, liver function tests, thyroid function tests, urea & electrolytes, and a urinary PCR.

If not checked in the preconception period, check vitamin D and B12 levels.

Ensure the woman is aware of how to manage severe hypoglycaemia or hyperglycaemia and aware of emergency contact numbers; prescribe glucagon if type 1 diabetes.

Provide a ketone meter and discuss appropriate testing for diabetic ketoacidosis (DKA) and sick day rules (see section 7.6.2); ketones should be tested if capillary blood glucose greater than 14.

7.2.3 Initial antenatal care

All women should have a scan at 7-9 weeks to confirm viability of pregnancy and gestational age.

Following confirmation of a viable intrauterine pregnancy a venous thromboembolism (VTE) risk assessment must be performed in line with local thromboprophylaxis in pregnancy guidelines.

Aspirin (150mg daily at night) should be initiated at time of viability scan and continued until 36+0 weeks gestation of pregnancy to reduce the risk of pre-eclampsia.

Offer consultation with dietitian for advice on the importance of diet (carbohydrate counting in type 1), exercise, weight management to support achievement of in-target glucose levels and assessment on nutritional adequacy.

Arrange booking by midwife (ideally by a DSM or diabetes continuity team) as early as practicable before 9 weeks.

Perform routine booking investigations and discuss routine pregnancy screening and surveillance (e.g. sickle cell disease, haemoglobinopathy, blood borne infectious diseases, aneuploidy screening, anomaly scan). Discuss the need for additional fetal growth surveillance and frequent contact (usually weekly) with the diabetes MDT.

Ensure retinopathy screening is arranged.

7.3 Considerations for women with complex diabetes in pregnancy

Optimal care for women with complex diabetes during pregnancy necessitates a collaborative approach involving not only diabetologists and obstetricians but also specialists from additional relevant fields. Each MMC must establish a network where each specialty is represented by a designated contact professional. This collaborative framework ensures a seamless flow of information and expertise, promoting a holistic understanding of the woman's health. By

incorporating professionals from varying backgrounds, a comprehensive and tailored care plan can be made. This approach not only optimises management but also supports collaborative working, enhancing communication and fostering a safe practice environment where each professional's unique insights contribute to the overall well-being of the woman.

Each MMC is equipped to facilitate and organise telemedicine across the MMN if it is safe for the woman. The option to facilitate consultations via telemedicine is available for pregnancies where it is difficult for the woman to attend an appointment in person. Telemedicine will also be used where expertise is required for specific cases and clinicians from several providers need to work together as a MDT to implement joint care plans. This mitigates the geographical challenges that occur when experts are not based at the same Trust.

Women with complex diabetes should be referred to the MMC MDT (Appendix 4) for discussion at the earliest opportunity during pregnancy. Conditions indicating discussion include:

- Retinopathy requiring/likely to require treatment during pregnancy
- Nephropathy – booking creatinine ≥77 µmol/l or PCR >30 mg/mmol and/or albuminuria (≥30mg/mmol)
- Autonomic neuropathy causing significant complications e.g. severe gastroparesis
- Cardiac dysfunction/ischaemic heart disease

7.4 Assessment of diabetes-related complications

7.4.1 Retinopathy

A retinal assessment should be carried out by digital imaging, during the first trimester and again at 28 weeks' gestation if the initial assessment is normal.

Those found to have retinopathy should have an additional assessment at 16-20 weeks and be referred to an ophthalmologist.

Women with pre-proliferative diabetic retinopathy, or any form of referable retinopathy diagnosed during pregnancy, must have ophthalmology follow-up for at least 6 months after birth.

Women with retinopathy requiring treatment during pregnancy should be discussed with the MMC MDT/complex diabetes clinic to ensure adequate ongoing review and treatment of retinopathy. Standard treatments for retinopathy are not contraindicated in pregnancy and ophthalmology services should be supported to offer treatment as indicated.

For women with complex retinopathy requiring treatment, management in the tertiary MMC is usually advised, in circumstances where travel to a tertiary clinic is not possible, ongoing care should be planned via regular (4-6 weekly) MDT discussion with the MMC centre throughout pregnancy using telemedicine as appropriate.

7.4.2 Nephropathy

For the purposes of this guideline, chronic kidney disease/nephropathy is defined as proteinuria (urine PCR ≥30mg/mmol/L) and/or raised serum creatinine (≥77 µmol/l at first pregnancy assessment.

Women with nephropathy should be referred to the MMC MDT to discuss investigation, ongoing care and surveillance.

For women with stable nephropathy, ongoing care within the local diabetes in pregnancy team is likely to be appropriate.

It is essential that there is a care plan documented which details the frequency of surveillance of renal function and blood pressure and that triggers for additional testing (e.g. diagnostic tests for pre-eclampsia) are documented.

PlGF (placental growth factor) based testing (NICE Diagnostic Assessment Guidance 2022) in the third trimester should be used to diagnose/exclude pre-eclampsia in women with new or worsening hypertension and proteinuria and/or concerns regarding fetal growth.

Referral and discussion with the MMC MDT should continue through the pregnancy with care transferred to the MMC complex diabetes clinic if there is significant deterioration (e.g. creatinine > 120 µmol/l or total proteinuria >3g per day (~PCR ≥300 mg/mmol). In circumstances where travel to a tertiary clinic is not possible, ongoing care should be planned via regular (4-6 weekly) MDT discussion with the MMC centre throughout pregnancy using telemedicine as appropriate.

Women with nephrotic range proteinuria (usually considered to be PCR ≥300mg/mmol) should be offered thromboprophylaxis with low molecular weight heparin. This should always be offered with ≥3g proteinuria per day but should also be considered at lower levels of proteinuria in the presence of other factors increasing the risk of venous thromboembolism, identified in the VTE risk assessment.

Women with anaemia should be investigated and treated where there is micronutrient deficiency.

Women with nephropathy are at very high risk of anaemia secondary to reduced erythropoietin production and should receive intravenous (IV) iron replacement and referral to the renal anaemia team for erythropoietin replacement.

7.4.3 Coronary artery disease

Discuss with MMC MDT to agree ongoing medication, care and surveillance.

Refer urgently to the cardiologist if required – refer to Regional Cardiac Disease in Pregnancy and the Puerperium guidelines where available.

7.5 Management of diabetes

The aim is to achieve normal blood glucose levels without significant hypoglycaemia.

If using blood glucose monitoring without CGM, women are recommended to test a minimum of 4-7 times per day pre- and post-meals and advise on the importance of bringing their blood glucose monitor (BGM) to each antenatal appointment to enable downloading of blood glucose recordings.

At each face-to-face contact, a review of CGM or digital glucose levels must be recorded in the health record. Records should include compliance with monitoring/testing.

Where an objective review of blood glucose levels cannot take place due to lack of testing or absence of meter to review, a further face-to-face appointment should be offered within 1 week.

At each remote contact, records should detail how glucose has been reviewed (verbal/cloud) and include compliance with monitoring/testing.

The minimum documentation for every glycaemic review should include:

- Type of monitoring
- Compliance/frequency of monitoring if finger prick testing
- Level and frequency of high and low blood glucose excursions

- Time in range (TIR) (if using CGM)
- Current treatment regime
- Any barriers to achieving target blood glucose levels
- Changes to treatment regime and advice
- Timing of next review

7.5.1 Target glucose levels:

- Pre-meal glucose: 4.0 - 5.3mmol/L
- 1-hour post-meal glucose: <7.8mmol/L
- 2-hour post-meal (when checked): <6.5mmol/L
- HbA1c <43mmol/mol
- If using real time or flash CGM aim for 70% TIR with pregnancy values 3.5-7.8 (ADA Consensus).
    - Time above range (TAR) = >7.8mmol/mol, <25% or <6hrs per day
    - Time in range (TIR) = 3.5-7.8mmol/mol, >70% or >16hrs 48mins per day
    - Time below range (TBR) = <3.5mmol/mol, <4% or <1hr per day; <3.0mmol/mol, <1% or <15mins per day
    - Postnatal TIR = 3.9 – 10.0mmol/mol

For women with type 2 diabetes taking metformin this should be titrated to a maximum of 2-2.5g/day as tolerated. Modified release preparations should be considered for women with gastrointestinal side effects, maximum dose 2g/day.

Insulin should be titrated according to blood glucose levels by a member of the MDT with expertise in insulin titration.

For women with type 1 diabetes, titration of insulin should be supervised by the diabetologist and diabetes specialist nurse, for women with type 2 diabetes, titration will usually be performed by the diabetes specialist midwife, specialist nurse, diabetologist or obstetrician as appropriate.

The diabetes teams should tailor the insulin according to needs of the woman and can consider use of newer ultra long-acting insulin or the ultra-rapid insulins where appropriate as per NICE guidance.

Women should be made aware they can only legally drive when their CBG level is >5.0mmol/L if on insulin.

At the end of pregnancy digital record of blood glucose monitoring must be saved as a PDF and uploaded onto electronic records. This can be carried out by the diabetes admin team.

7.5.2 Hospital admissions

Every Trust must have an agreed policy for provision of inpatient care for women requiring hospital admission during pregnancy. Whether the ongoing admission is within medical or obstetric services, care must involve the MDT and be led by the diabetes antenatal team. Involvement of expereinced obstetricians and diabetologists is essential for ongoing management of pregnant women with diabetes particularly women admitted at risk or with established diabetic ketoacidosis (see section 7.6.2). Where possible inpatient admissions should be facilitated within maternity services throughout pregnancy; this is essential after 26 weeks' gestation.

Hospital admissions should be considered in the following situations:

- Unsafe blood glucose levels e.g. frequent, sustained excursions ≥10mmol/l, TIR ≤50% where there has been no improvement with outpatient support, unable to comply with outpatient monitoring and treatment without additional support.
- Early pregnancy HbA1C ≥ 86mmol/L if no marked improvement in BG levels. Supplementary Obstetric Variable Rate Intravenous Insulin Infusion (VRIII) should be offered to achieve rapid improvement in glucose levels, particularly in women with Type 2 where it allows introduction of large doses of insulin quickly and safely (See Appendix 5 for examples of VRIII support)

Admission for hyperglycaemia should be facilitated under maternity services, where the staff are familiar with the pregnancy specific glucose targets.

7.5.3 Identifying women at particularly high risk of adverse pregnancy outcomes

HbA1C is a useful indicator of risk in pregnancies complicated by diabetes and should be used as one of the ways of identifying women at particularly high risk of adverse outcomes.

Adverse pregnancy outcomes are associated with a late pregnancy HbA1C ≥48mmol/mmol and TIR ≤70%.

Type 2 diabetes is an independent risk factor for perinatal death.

Adverse outcomes (including perinatal death) are more common in women from deprived areas and/or with complex social circumstances. The MDT must be proactive in offering solutions and support for women with complex medical/social needs during pregnancy, particularly when there are barriers to achieving target blood glucose levels.

Each service should organise a regular (e.g. weekly or monthly) MDT to formally discuss women not achieving target blood glucose levels.

HbA1c must be measured at booking and at the start of the second (16-18 weeks) and third trimester (around 24-28 weeks). HbA1c may be repeated in the third trimester if clinically indicated.

Women with a first trimester HbA1C ≥58mmol/mmol should be discussed within the local MDT to support early and rapid improvement in blood glucose levels.

7.6 Management of women in third trimester

Women with a third trimester HbA1C ≥48 mmol/mmol should be discussed at the local MDT and the discussion documented as part of the clinical record.

The MDT discussion should consider (not limited to) flexibility with face-to-face or telephone contacts as preferred, alternative glucose monitoring (e.g. CGM), adjustment of treatment (e.g. CSII, insulin type), opportunity to involve a wider support network in care, signposting to other support services, offering admission.

If adequate blood glucose control is not obtained by multiple dose injections of insulin without significant disabling hypoglycaemia, women with type 1 diabetes may be considered for CSII. If CSII is introduced, the approach should be individualised and women should be made aware of the potential increased risk of DKA with CSII due to the lack of background insulin.

Green	HbA1c 43 mmol/mol or less	Continue current care
Amber	HbA1c 44-48 mmol/mol	Consider additional input to improve glucose management
Red	HbA1c more than 48 mmol/mol	MDT discussion required. If HbA1c > 48mmol/mol in the third trimester this needs formal discussion in High HbA1c MDT. Offer additional input to improve glucose management including alternative methods of monitoring treatment Offer increased fetal surveillance, and rediscuss increased risk of stillbirth and neonatal complications

Table 3 Guidance for ongoing according to third trimester HbA1C

7.6.1 Hypoglycaemia

Inform women of the risk of hypoglycemia (CBG<4mmol/L) and hypoglycaemia unawareness in pregnancy.

Prescribe and instruct on the use of glucagon where appropriate. Teach women how to treat hypoglycaemia and provide them with glucose tablets or GlucoJuice, where available, to have with them at all times also giving them an ID card to carry. Teach partners or close relatives how to administer glucagon if 3rd party assistance is necessary.

Inform women they must test prior to driving and that they legally cannot drive unless capillary blood glucose CBG is >5mmol/mol. Blood glucose testing must be carried out regularly, at least every two hours, on longer journeys. Advise them to carry hypo treatment in the car.

Inform women they must tell DVLA if their insulin treatment lasts (or will last) over 3 months, if they get disabling hypoglycaemia, or if a medical professional has told them they are at risk of developing disabling hypoglycaemia.

Women MUST NOT drive if they have lost their hypoglycaemia awareness. Clinicians have a duty to inform the DVLA if they have evidence that a woman is not complying with the regulations.

7.6.2 Hyperglycaemia/Diabetic ketoacidosis (DKA)

Inform women of the risk of hyperglycaemia and risk of diabetic ketoacidosis in pregnancy. Women should be provided with written information regarding sick day rules (see examples in Appendix 6) and procedures to manage pump failure (see section 13).

Prescribe and instruct women with type 1 diabetes on the use of blood ketone testing to be used if unwell or hyperglycaemic.

Women with type 2 diabetes should have a blood ketone test performed if unwell where a meter is available.

Women suspected as having ketoacidosis should be admitted to level 2 critical care environment.

All services must have a local guideline detailing the management of DKA agreed between medicine, emergency departments, critical care and obstetrics. The guideline should specify which medical personnel should be contacted and where pregnant women with DKA should be treated. See example pathway Appendix 7.

7.6.3 Ultrasound

Offer a standard anomaly scan between 18+0 and 20+6 weeks.

For women who have had a baby with a previous cardiac anomaly, referral for fetal echocardiography should be offered.

Consider scan for uterine artery Doppler at the anomaly scan or at 22-24 weeks' gestation if additional risk factors for fetal growth restriction (FGR) in addition to diabetes (according to SBL v3). If uterine artery Doppler assessment is normal at the 20 week anomaly scan, it is not necessary to repeat the assessment and growth scans should be commenced from 28 weeks' gestation.

For women with a positive uterine artery screen and/or estimated fetal weight (EFW) <10th centile at the anomaly scan, specialist assessment with fetal wellbeing assessment before 28 weeks is indicated.

Serial growth scans from 28 weeks every 3-4 weeks including umbilical artery Doppler, or more frequently if clinically indicated.

If there are abnormalities in umbilical Dopplers, referral in line with the NW regional fetal growth restriction guideline.

7.6.4 Ongoing antenatal care

Women with diabetes should be offered continuity of midwifery care through the diabetes in pregnancy service.

Appointments with additional teams should be minimised unless required for specialist reasons (e.g. cardiac care, specialist perinatal mental health).

The MDT clinic should endeavour to address all pregnancy care needs and provide an open access, flexible service.

Thromboprophylaxis should be offered in line with local antenatal care guidelines.

Hypertension (≥140 and/or ≥90 mmHg) should be treated with agents considered to be safe in pregnancy. NICE supports the off-label use of Nifedipine, Labetalol, Amlodipine and Methyldopa.

As per NICE Hypertension in Pregnancy guidelines, target BP is 135/85 mmHg. Women should be encouraged to supplement clinic BP monitoring with home BP monitoring using a validated digital device.

PlGF-based testing (NICE Diagnostic Assessment Guidance 2022) should be used to diagnose pre-eclampsia in women with new or worsening hypertension (≥24 weeks) and proteinuria and/or concerns regarding fetal growth. PlGF-based testing should be considered as an adjunct to the clinical assessment in women with reducing insulin requirements without another explanation.

7.6.5 Corticosteroids

Corticosteroids should be offered to women with diabetes where birth is planned or anticipated before 35 weeks' gestation and offered in line with the Regional preterm birth guideline. Where possible corticosteroids should be given in the 24-48 hours preceding birth to maximise benefit and minimise harm.

In women with diabetes where birth is anticipated between 35-36+6 weeks, corticosteroids should be discussed and offered in line with the NW Regional preterm birth guideline; recognising the potential benefits (reduction in short term respiratory morbidity) and harms (increase in

neonatal unit admission for neonatal hypoglycaemia and potential increased risk of childhood neurocognitive/divergent disorders).

All women with diabetes must be offered hourly CBG monitoring (within six hours of receiving intramuscular antenatal corticosteroids) and supplementary variable rate insulin as indicated to maintain blood glucose between 4-8 mmol/L. All services must have a guideline which includes supplementary variable rate insulin scales for use following corticosteroid administration. CGM can remain in place but should not be solely used for glucose monitoring. See example Appendix 8 and JBDS 12 Guideline.

Corticosteroids should not be used routinely for births ≥37 weeks' gestation (regardless of planned mode of birth).

7.6.6 Plan for birth

A provisional plan for birth should be discussed in early pregnancy with the woman and then confirmed by the MDT (example plans included in Appendix 9). The plan should be developed from 32 weeks and finalised by 36 weeks' gestation with the aim of birth by 38 weeks +6 days gestation if not indicated sooner. The birth plan should include individualised details regarding insulin therapy for both intrapartum and postnatal periods. A postnatal diabetes care plan should be discussed and completed by a member of the diabetes team and documented in the clinical record.

If fetal macrosomia (abdominal circumference >97th centile and/or estimated fetal weight >95th centile) is present, discuss risk of shoulder dystocia and offer induction of labour and caesarean section depending on the individual circumstances and preferences of the woman. Discussion should be individualised based on the whole clinical picture. Where biometry is asymmetrical (with increased/acceleration abdominal circumference), discussion regarding mode of birth and timing of birth should be agreed following a discussion of the risks with the woman.

7.6.7 Breastfeeding advice

Every effort should be made to ensure that women with diabetes are encouraged to breastfeed and are taught to hand express and store their colostrum in the antenatal period. This helps to reduce the risk of neonatal hypoglycaemia.

- Women should be advised to start colostrum harvesting from 36 weeks.
- During the induction process women should be offered support with colostrum harvesting and storage.

8 Intrapartum Management

8.1 Spontaneous Labour

Once the woman is admitted, the on-call consultant obstetrician should be informed if on-site or as required if off-site, and the diabetes intrapartum care plan reviewed.

When in established labour should stop Metformin and mealtime subcutaneous insulin, continue long-acting subcutaneous insulin at postnatal dose to prevent maternal postnatal hypoglycaemia. For women using CSII, the basal rate should be reduced to the agreed postnatal basal rate according to the woman's personalised care plan. If no care plan is

available, women should reduce their basal rate to 50% of their lowest basal rate. If a woman (or her birthing partner) are not able to manage the CSII during labour for any reason, variable rate insulin infusion should be used.

8.2 Induction of Labour

The management of diabetes during induction of labour should be documented in the woman's individual diabetes intrapartum care plan (Appendix 9). Women should continue their antenatal diabetes treatment until they are in established labour. Blood glucose should be recorded pre and post meals; more frequent monitoring may be required if blood glucose is outside the target range (4-8 mmol/L).

Prostaglandin induction

The woman should continue with her normal subcutaneous insulin regime (long acting and mealtime boluses) and oral agents until in established labour.

Augmented Labour and oxytocin

Oxytocin must be added to Sodium Chloride 0.9% and the woman's diabetes management should be the same as for women in spontaneous labour.

Specific Obstetric Points

Secondary arrest of labour must be discussed with the on-call consultant obstetrician as unexpected macrosomia may be present.

An experienced obstetrician (ST3 or above) should be present at birth if there is suspected macrosomia. An oxytocin infusion should only be used with extreme caution and after discussion with the on-call consultant obstetrician in cases of delay in established labour in multiparous women.

8.3 Management of Diabetes in Active Labour

- Once in established labour CBG monitoring should be performed hourly using the Trust point of care glucometer or the woman's own glucometer; CGM can be left in place but shouldn't be relied on for blood glucose monitoring in labour. Discussion with the woman and consent should be obtained.

- In established labour the aim is to maintain normal glycaemia with the target range 4-8 mmol/L.

- Obstetric VRIII is not mandatory for women whose blood glucose levels are between 4-8 mmol/L

- A VRIII should be commenced in line with local hospital guidance for all women with diabetes where there are 2 consecutive recorded CBG ≥ 8mmol/L or 1 measurement above 10mmol/L.

- Long-acting subcutaneous (SC) insulin should be continued at postnatal dose (see section 9.1.1), if continuing insulin postnatally, to reduce the risk of maternal postnatal hypoglycaemia.

- If the woman's target glycaemic control is not achieved within 2 hours of commencing VRIII, then consider adjusting the scale in line with local guidance (see example in Appendix 5). If a woman's target glycaemic control is not achieved within a further 2 hours of adjusted VRIII a further increase to the scale should be considered; sliding scale adjustments should be discussed with consultant medical staff on the labour ward.

- Following completion of the third stage, either reduce the rate of VRIII by 50% (or change to the lowest scale) or for women who were on oral glucose lowering drugs alone before pregnancy, stop the VRIII.

Please see section below for additional guidance for women using CSII.

8.4 Elective Caesarean Section

- The management of the woman's diabetes prior to caesarean section should be documented on the diabetes intrapartum care plan (Appendix 9). On admission the timing and dose of insulin must be documented. Ensure no dose of long-acting insulin has been withheld.
- Women with diabetes should follow the same care plan for women without diabetes for routine elective caesarean sections.
- Women with diabetes must not be offered pre-op nutrition drinks
- Ideally, women with diabetes who are scheduled to have an elective caesarean section should be scheduled first on the morning caesarean section list.
- Following admission CBG should be checked hourly.
    - If CBG <4mmol/L then follow the hospital hypoglycaemia guideline and use clear glucose juice or IV dextrose to correct BG levels.
    - If CBG ≥8mmol/L on two consecutive occasions one hour apart, then commence VRIII as per local guidance if surgery is not expected within 30 minutes. If CBG ≥ 10 commence VRIII; ideally birth should occur when blood glucose is 4-8 mmol/L.
    - It is reasonable to accept a perioperative CBG in theatre of 4-8mmol/L pre-delivery and 4-15mmol/L post-delivery. Blood glucose levels over 15mmol/L should prompt testing for ketones and senior obstetric /anaesthetic review.
    - Perform CBG at least hourly prior to and during caesarean section if under regional anaesthesia and at least every 30 minutes if under general anaesthesia until woman is fully conscious postoperatively.

8.5 Women using a continuous subcutaneous insulin infusion pump (CSII)

Women can continue with this therapy in labour or when having an elective caesarean section **only** if previously agreed and documented in the intrapartum diabetes care plan by the consultant diabetologist and the women is able to manage the pump. If the woman is unable to manage her own CSII pump, it must be turned off and a VRIII commenced. No member of medical staff should make changes to an insulin pump**.**

For women using CSII with closed loop if VRII is indicated the closed loop function should be turned off. If there is any uncertainty regarding the use of the pump it should be removed or switched off.

8.5.1 Prior to admission for birth

- The woman should be advised to replace their pump cannula on the day before surgery/admission for induction of labour (IOL).
- The reservoir should be full of insulin and new or recently replaced batteries should be in place. Women should be asked to bring spare pump sets/pods.
- The cannula should have been sited well away from the area of the surgery (at least 15cm if possible) and in a site still accessible by the theatre team (not on back or buttocks).
- Patient should continue insulin pump at basal rate agreed by consultant diabetologist.

8.5.2 During Active Labour

- If the hypoglycaemia guideline is triggered **STOP** CSII and follow the protocol for the management of hypoglycaemia. As soon as CBG is above 4.0mmol/L commence VRIII and do not recommence CSII.
- If 2 CBG's are >8 mmol/L or ketones ++ or high capillary blood ketones (> 1.5 mmol/L) then commence VRIII and turn off CSII.

8.5.3 Caesarean Section using CSII

- Hourly CBGs from admission.
- Woman should change to her pre-agreed post-partum CSII settings just prior to surgery starting.
- Anaesthetic/ operating department/recovery personnel should check pump site for disconnection/kinking pre-op, peri-op and in recovery.
- CBGs at least every hour under regional blockade. If the woman requires a GA switch off or remove CSII and commence VRIII as the woman is no longer able to self-manage CSII.
- If CBG>8mmol/L on two occasions, one hour apart, perioperatively, pre-delivery or over 15mmol/L once baby is born. Commence VRII the woman's CSII must be in manual mode and if there is any uncertainty the CSII should be removed or switched off.
- If the hypoglycaemia guideline is triggered switch off or remove CSII and follow the protocol for the management of hypoglycaemia. As soon as CBG is above 4.0mmol/L commence Obstetric VRII.
- If the CSII pump alarms during the procedure, do not attempt to rectify; monitor CBG every 30 mins:
- If >15mmol/L post-birth should prompt capillary ketone testing and experienced (ST3 and above) obstetric/anaesthetic review.
- If the CSII alarm persists, remove CSII and cannula (once VRIII has been commenced)

8.5.4 Diathermy and CSII pumps

There is a theoretical risk of electromagnetic interference (EMI) with diathermy and the CSII pump. The manufacturers recommend removing the CSII pump if diathermy is to be used. This needs to be balanced against the risks of discontinuing the CSII and converting to a VRIII. Hospitals worldwide have been using diathermy safely with insulin pumps for many years with measures taken to minimise the risk of any interference to the pump (JBDS 3 Guideline and see below).

Minimising risk of EMI with diathermy and a CSII pump:

- Use bipolar diathermy where possible
- If using monopolar diathermy, site the grounding electrode near to the surgical site and use short bursts of diathermy.
- The woman should site the CSII pump as far from the surgical site as possible- at least 15cm above the surgical site (above the umbilicus).
- Use lowest effective diathermy settings for electrocautery

8.5.5 Post-operatively using CSII

- Continue with hourly CBGs until eating and drinking
- Once alert and orientated post-operatively, the women should self-correct to a CBG of 6-10mmol/L
- Women can then recommence mealtime boluses once eating and drinking normally.
- If an VRIII has been commenced and CSII stopped, can restart CSII as soon as the woman feels able to at the post-birth
- Do not stop the VRII until one hour after the CSII basel insulin in manual mode has been restarted
- Ensure the woman has made postnatal changes to basal rates, carbohydrate ratios, correction factor and target glucose as documented in the postnatal plan, including the use of any closed loop system
- If there is any uncertainty CSII should remain in manual mode and contact the Diabetes team for review

9 Early Postnatal Care

9.1 Postpartum Management

Women's insulin requirements are usually low for at least 24-48 hours following the birth, often much less than pre-conception doses. The recommended doses must be documented in the care plan. If there is no care plan available, then insulin doses must be reduced to 50% of the most recent dose regime.

An insulin bolus is usually not required for the first food taken post-birth. The emphasis is now on avoidance of maternal hypoglycaemia so glycaemic targets are relaxed. Medical staff and women should be aware that glycaemic targets can be relaxed in the postnatal period.

9.1.1 Immediate post-delivery insulin requirement

- Following delivery of the placenta, VRIII infusion rate should be reduced by 50% in all women with pre-existing diabetes on VRIII.
- Women should commence their recommended Insulin/treatment regimen as documented in the postnatal care plan (this is usually 50% of the most recent dose or 75% of their dose at 12 weeks in women with type 1 diabetes).
- In women with type 1 diabetes on multiple daily injections (MDI) basal insulin should have been continued alongside VRIII. If basal insulin dose has been missed give immediately; VRIII should be continued for at least 60 minutes.
- In women with type 1 diabetes who have had caesarean section, or in others who are unable to eat or drink, the VRIII should remain in situ until the woman can tolerate

diet and fluids and discontinued as above. Basal insulin should continue alongside Obstetric VRIII at postnatal doses.

- In women on VRIII and CSII women should ensure that the pump is functioning correctly and has been running for at least 60 minutes before VRIII is stopped. Ensure the woman has changed over to postnatal pump settings.
- In women with type 2 diabetes, VRIII can be discontinued following the birth and their individual postnatal care plan followed.

9.1.2 Postpartum Blood Glucose Monitoring

Women should recommence blood glucose monitoring with CGM or capillary blood glucose at least 4 times a day; pre-meal and pre-bed and if there is any clinical concern. If there are ≥2 readings over 15mmol/L (1 hour apart) check for blood ketones. Inform Obstetric and Anaesthetic teams if ketones are >0.6mmol/L and if >3mmol/L follow local DKA protocol. Escalate to the Diabetes/Medic (ST3 or above) on call urgently if there is DKA or any other clinical concern.

If hypoglycaemic (CBG <4) see Local hypoglycaemia guideline. If ongoing hypoglycaemia, urgent review required by a member of the Diabetes pregnancy team to adjust treatment.

Ensure that the postnatal management of diabetes co-morbidities or other medical conditions (e.g. Hypertension, Renal Disease etc.) are addressed.

Blood glucose targets (mmol/L):

	Preconception	Antenatal	Peripartum	Postnatal
Fasting (mmol/L)	5 -7	4 – 5.3		5 -7
Premeal (mmol/L)	4 – 7	4 – 5.3		5 -7
1 hour post meal (mmol/L)		<7-7.8 based on clinical judgment of treating physician		6 – 11
2-hour post meal (mmol/L)	< 9	Below 6.5		6 – 11
Bedtime (mmol/L)	5 -7	5 – 6		6 – 11
Situational (mmol/L)			4 – 7*	
HbA1C (mmol/mol)	< 48	< 48		

If using CGM aim for 70% TIR with pregnancy values 3.5-7.8 mmol/L:

Time above range (TAR)	>7.8mmol/L	, <25% or <6hrs per day
Time in range (TIR)	3.5-7.8mmol/L	>70% or >16hrs 48mins per day
Time below range (TBR)	<3.5mmol/mol <3.0mmol/mol,	<4% or <1hr per day <1% or <15mins per day
Postnatal TIR	3.9 – 10.0mmol/mol	

9.2 Breast feeding

Women should be encouraged to breast feed. They should be made aware that this can increase the risk of hypoglycaemia. Advise women if possible to have a blood glucose >5mmol/L prior to feeding and have carbohydrate snacks available. Reassure women that Metformin is safe to continue whilst breastfeeding but other oral agents for Type 2 Diabetes should be avoided unless otherwise stated in personalised care plan.

Advise women that their baby should be fed within 30 minutes of birth and at least every 2-3 hours thereafter in the first 24 hours to reduce the risk of neonatal hypoglycaemia (NICE 2015). Neonatal capillary blood glucose should be checked pre-feed in line with the local neonatal hypoglycaemia policy.

10 Neonatal Care

Babies born to women with pre-existing diabetes are at an increased risk of hypoglycaemia and women should be provided with information about the importance of early and regular feeding (every 2-3 hours) and the signs of hypoglycaemia in the newborn. Women should be encouraged to collect colostrum pre-birth and have this available at the time of birth. Hospitals must have facilities to store fresh and frozen colostrum for women.

For term babies perform newborn capillary glucose 2-4 hrs following birth and then follow local neonatal hypoglycaemia guideline, aiming to maintain blood glucose above 2mmol/L.

For any preterm birth follow local neonatal guidelines.

11 Contraception

- Contraception should be discussed with all women who have pre-existing diabetes (Appendix 10).
- Advise women with pre-existing diabetes that future pregnancies should be planned, and effective contraception and pre-pregnancy care are essential.
- The contraceptive advice for women with diabetes should follow that of the general population and long-acting reversible contraception (LARC) should be offered as first line.
- Women with pre-existing diabetes are more likely to have risk factors that would make the combined oestrogen/progesterone pill contraindicated so other methods should be considered.
- Contraceptive services should be offered prior to discharge.

12 Subsequent Postnatal Care

12.1 Safe Discharging

- The personalised postnatal care plan should be reviewed, and women should have a medical assessment prior to discharge
- Women with diabetes are suitable for discharge when their blood glucose is within the postnatal targets (see section 9.2.2) without episodes of hypoglycaemia or sustained blood glucose >15mmol/L.
- In women where there are ongoing concerns with blood sugar control advice from the diabetes team should be sought within 24hours to avoid delays in discharge
- The diabetes team should be informed of all women within 72hours of discharge according to local policy.
- Where possible a postnatal follow-up by the diabetes team should be arranged prior to discharge. Where this has not been possible arrangements must be in place to arrange a follow up in 6-8 weeks.
- All women must be provided with contact numbers for the diabetes team responsible for ongoing care according to local policy.

13 Sources of Support

Diabetes UK (includes pump failure support)	https://www.diabetes.org.uk/ https://www.diabetes.co.uk/insulin-pumps/insulin-pump-problems.html
Breastfeeding support	https://laleche.org.uk/diabetes-and-breastfeeding/ https://www.breastfeedingnetwork.org.uk/
ABCD support	https://abcd.care/sites/default/files/resources/Pregnancy-Tips.pdf https://abcd.care/sites/default/files/site_uploads/Resources/DTN/Dexcom-Tips.pdf
JDRF	https://jdrf.org.uk/resources/pregnancy-toolkit/
Pre-conception information	https://www.diabetes.org.uk/guide-to-diabetes/life-with-diabetes/pregnancy
Pregnancy with Diabetes Video	https://www.youtube.com/watch?v=ERNTYdBI6W4 Diabetes in pregnancy general (Embedded Video) For translations, please click below: BSL (Link) https://www.youtube.com/watch?v=62rXa-8ue28 – Diabetes in general BSL version

	Polski (Link) https://youtube.com/watch?v=FnmpLgeEtR0 – Diabetes in general Polish translation Urdu (Link) https://www.youtube.com/watch?v=OvwTNytFn_k – Diabetes in Urdu translation Soomaali (Link) https://www.youtube.com/watch?v=wr8qbOD9w2M – Diabetes in general Somali translation
Pump tech companies	https://www.freestyle.abbott/in-en/pregnancy.html https://www.dexcom.com/en-GB/pregnancy-dtc
JBDS-IP (Joint British Diabetes Societies for Inpatient Care)	Managing diabetes and hyperglycaemia during labour and birth February 2023

14 Monitoring and Audit

This guideline has been peer reviewed by the Regional Guidelines Group. It is the responsibility of the authors to update the guideline every 3 years or sooner should substantial amendments be required.

Audit criteria:

- Percentage of women with type 1 diabetes that are offered a pregnancy specific HCL system during pregnancy (aiming for >60% of women in 25/26 and >95% from 26/27) as well as the percentage accepted.

Percentage of women with type 1 and type 2 diabetes:

- that have an HbA1c measured at the start of the third trimester (aiming for >95% of women)
- achieving HbA1C <43 in third trimester >40% - stretch >50%
- that have a birth < 37 weeks <50% - stretch <40%
- that require NICU admissions <40% - stretch <30%
- that have a LGA baby <50% - stretch <40%

Compliance data for outcome indicators should be reported by ethnicity and deprivation to ensure focus on at-risk and under-represented groups.

15 Consultation with Stakeholders

Midwives, Obstetricians, Endocrinologists and specialist nurses working in the North West Regional Maternity Network and service users and maternity and neonatal voices partnership.

Appendix 1: North West maternity providers

LMNS	Cheshire & Merseyside	Greater Manchester & Eastern Cheshire	Lancashire & South Cumbria
MMC	Liverpool Women's Hospital NHS FT	Manchester University NHS FT St Mary's Hospital Oxford Road Campus	Lancashire Teaching Hospital (Preston)
Provider Trusts	Countess of Chester Hospital NHS FT Mid-Cheshire Hospitals NHS FT (Leighton) Mersey and West Lancashire Teaching Hospitals NHS Trust (St Helens & Knowsley) Mersey and West Lancashire Teaching Hospitals NHS Trust (Southport & Ormskirk) Warrington & Halton Teaching Hospitals NHS FT Wirral University Teaching Hospital NHS FT	Bolton FT East Cheshire NHS Trust (Macclesfield) MFT North Manchester General Hospital MFT Wythenshawe Northern Care Alliance NHS FT Stockport NHS FT Tameside & Glossop NHS FT Wrightington, Wigan and Leigh NHS FT	East Lancashire Hospital NHS Trust University Hospital Morecambe Bay NHS FT (Furness) University Hospital Morecambe Bay NHS FT (Lancaster) Blackpool Teaching Hospitals NHS FT

Appendix 2 Type 1 & Type 2 Diabetes Clinic- Core Offer

Dedicated clinic/Template
Providers should offer a dedicated (separate) clinic for pregnant women with Type 1 and Type 2 diabetes. Recognising the additional needs of women with type 1 and type 2 diabetes, the length of appointments for this clinic/template should be extended. For providers with a smaller case load of women, it is anticipated that the clinic will incorporate telephone reviews, face to face visits, MDT discussion of high risk women, postnatal reviews and admin.

Continuity of midwifery care
The care of women with pregestational diabetes should be led and coordinated by the diabetes midwifery team. Women should be offered continuity of midwifery care within the MDT clinic avoiding additional visits with care providers outside of the diabetes midwifery team unless essential to address specialist care requirements (e.g. specialist perinatal mental health, cardiac services) or recognised to be in the interest of the woman (ie travel constraints). For larger services, it will be necessary to offer visits/contacts in between the MDT clinic as appropriate and the service should be adequately resourced to support these additional care needs.

Multidisciplinary approach
A full team approach should be taken for all clinical reviews; women should be reviewed by the team member(s) most appropriate for each visit. The MDT should include an obstetrician with expertise in the management of diabetes/maternal medicine, a diabetologist with expertise in diabetes in pregnancy, a diabetes specialist nurse and/or midwife who has expertise in the review of CGM and titration of treatment and a dietician or staff member adequately trained to support dietary advice.

Face-to-face appointments
All needs should try to be addressed in the same clinic – i.e. supporting other medical/social needs, so the face-to-face appointments will be longer to accommodate this.

Telephone
Additional, regular telephone reviews should be undertaken, as well as face-to-face appointments in order to maintain weekly contact.

MDT discussion of high risk women
Women with a high HbA1C and/or women where there are ongoing concerns regarding diabetes management should be discussed at least once during pregnancy by the MDT. Depending on service requirements, MDT meetings may be incorporated within the MDT clinic or at another time during the week/moth. A record of the MDT discussion should be filed within the case notes.

Capacity

A case load of 15 women per year (with weekly contact) would mean providers undertake a total of 9 face-to-face or telephone contacts per week.

A case load of 20 women per year (with weekly contact) would mean providers undertake a total of 12 face-to-face or telephone contacts per week.

A business case might be needed to establish this type of clinic in order to comply with SBLv3.

Inequality

The clinic should also address the key concepts of diabetes-related health inequality, considering the wider social, environmental and economic factors that impact on those in our care, such as the accessibility of the clinic, modes of information and the ability of individuals to self-manage their condition. Think about cultural differences and work with service users to ask what is wanted and needed. More information can be found at: Tackling Inequality Commission | Diabetes UK

Service provision for diabetes services based on case load of pregestational and gestational diabetes

Service component	*See assumptions described below and hours calculator for more specific calculations*			
Total PGD per year	**<50**	**50-80**	**>80**	**>100**
Approx GDM per year	**<300**	**4-500**	**5-600**	**6-700**
Diabetes consultant time[§] (PAs) Clinics, inpatient reviews, MDTs) (including provision for prospective cover)	2-3	3-4	4-5 *2.5-3 if Obs/DSM only uncomplicated GDM clinics*	5-6 *3-3.5 if Obs/DSM only uncomplicated GDM clinics*
Obstetric consultant time (PAs) Clinics, inpatient reviews, MDTs (including provision for prospective cover)	2	3-4	4 *5-6 if Obs/DSM only uncomplicated GDM clinics*	5 *6-7 if Obs/DSM only uncomplicated GDM clinics*
DSM/DSN/Dietician/Band 4 posts (FTE)- minimum	2.5-3 (including min 0.8 FTE DSN equivalent role)	3.5-4.5 (including min 1.1 DSN equivalent role)	5.5-6 (including min 1.5 DSN equivalent role)	6-7 (including min 1.7 DSN equivalent role)
DSM/DSN/Dietician/Band 4 posts (FTE) <u>including booking</u> - minimum	5.2	7-8	9-10	11-12

Important notes:

1. Services within MMCs should consider additional uplift to address additional complexity
2. Services serving populations with high areas of deprivation and high percentages of women whose first language is not English
3. Table does not include provision for preconceptual appointments

These numbers reflect a minimum requirement based on the following assumptions:

	Type 1 diabetes
Diabetes Cons	Based on an average of 10x30 min contacts per woman per year (including admin) + 50% of women discussed at MDT for 30 mins once per pregnancy and inpatient reviews (30mins per pregnancy). Total hours needs to include arrangements for prospective cover. **NB For services without a DSN - significant increase in diabetes time will be required, see DSN requirements for number of hours per week**
Obstetrics	Based on an average of 8x20 min contacts per woman per year (over 52 weeks) + 50% of women discussed at MDT for 30 mins once per pregnancy and inpatient reviews (30mins per pregnancy). Total hours needs to include arrangements for prospective cover
DSN/Technology	1-2 contacts per week (inc face to face and telephone) + MDT + IP support
Midwifery	12 contacts per pregnancy + MDT and IP support. (e.g. NPID)
Booking	1.5 hours per woman including admin, assuming pregnancy loss rate of 10%
Dietician	10 hours per pregnancy
NPID	1 hour per pregnancy
Notes	*Flexibility between DSM/DSN/dietician/Band 4 roles depending on skill mix available.*
	Type 2 diabetes
Technology	Technology 6 hours per pregnancy (on average, will not be required for all women)
Midwifery	1-2 contacts per week (inc midiwfery care, diabetes review, MDT and IP support). Some hours may be used for meter and insulin starts by e.g. Band 4 staff. Includes clinical admin (e.g. letters to GPs and NPID)
Booking	1.5 hours per woman including admin, assuming pregnancy loss rate of 10%
Dietician	3 hours per pregnancy
Diabetes	10x30 min contacts per pregnancy (includes admin)
Obstetrics	8x20 min contacts per pregnancy
NPID	1 hour per pregnancy
Notes	Technology time and DSN/DSM review will vary depending on skill mix and uptake of CGM for women with Type 2 DM
	Gestational diabetes (prevalence approx. 8% maternities)
Diabetes	2 contacts per pregnancy (on average recognising variation)

Obstetrics	3 contacts per pregnancy (on average) assuming additional obstetric support from trainees. Flex between Obs and Diabetes PAs depending on provision for GDMs
Dietician	1 hour per pregnancy
Midwives and support	Based on an average of 16x30 min contacts per pregnancy for women with early/prior GDM (33%) and 9x30min contacts for later GDM including meter/monitoring set up and insulin starts and admin (e.g. letters to GPs)

Appendix 3 Service time allocation Calculator

Service%20time%20allocation%20v3.xlsx

Appendix 4 Referral details for MMC

St Marys Hospital Manchester MMC	
MDT co-ordinator (Mon-Fri 8-4)	MDT Coordinator Email: mft.nwmaternalmedicine@nhs.net
Referral form	MFT Maternal Medicine Referral Form (office.com)
EMERGENCY	On call Consultant Obstetrician: Switchboard: 0161 2761234 ask for Obstetric Consultant on call Bleep Bleep 6000 or via Vocera

Liverpool Women's Hospital MMC	
MDT co-ordinator (Mon-Fri 8-4)	Tel: 0151 702 4271 Email: maternal.medicine@lwh.nhs.uk
Referral form	https://tinyurl.com/LWHMatMedReferral
EMERGENCY	On call consultant Obstetrician: Switchboard: 0151 708 9988 ask for Obstetric Consultant on call Bleep 100

Lancashire Teaching Hospital (Preston) MMC	
MDT co-ordinator (Mon-Fri 8-4)	maternal.medicine@lthtr.nhs.uk
Referral Process	For patients on BadgerNet use maternal medicine referral form in each patients notes For Patients not on BadgerNet email maternal.medicine@lthtr.nhs.uk
EMERGENCY	On call consultant Obstetrician : Switch board 01772716565 Bleep 4371 Out of hours medical registrar on call via switch board

Appendix 5: VRIII Examples of Support

	Obstetric patient requiring VRIII Complete all steps (a-d)	
	Patient eating and drinking normally i.e. requires steroid therapy or poor glycaemic control (see page 4 for guidance on administering steroids)	**Patient NBM or unable to tolerate oral diet** i.e. going to theatre or unable to eat and drink due to N+V or in labour
a) Regular therapy	Prescribe and continue all usual subcutaneous insulin and oral diabetes medication	Continue long acting insulin only
b) IV insulin	Prescribe appropriate IV insulin regime (see page 3)	Prescribe appropriate IV insulin regime (see page 3)
c) Monitoring	• Check capillary blood glucose (CBG) hourly • Check U+Es daily	• Check capillary blood glucose (CBG) hourly • Check U+Es daily
d) Fluid management	• Patients who are eating and drinking normally **do not** need the fluid regime on page 2 prescribing • If the patient subsequently becomes NBM then the fluid regime on page 2 should be prescribed • These patients may still require alternative fluid replacement or resuscitation prescribing if they are unwell on the regular drug chart	• Prescribe the fluid regime on page 2. • The choice of fluid is determined by the serum potassium. • Ready-made bags should always be used. Concentrated potassium must **never** be added to a bag of fluid • The fluid should be prescribed at the standard rate of 83mL/hr unless the patient has severe pre-eclampsia, an eGFR <30 or are fluid restricted should have the fluid prescribed at the reduced rate of 42mL/hr

Capillary Blood Glucose (CBG) mmol/L	Insulin Rates (ml/hr)			
	Scale A	Scale B	Scale C	Scale D
	For women on < 80 units of insulin a day	For women on 80 - 120 units of insulin a day **or** not controlled on scale A	For women on > 120 units of insulin a day **or** not controlled on scale B	Modified rate
< 4.0	**Stop insulin infusion** and treat hypoglycaemia as per local policy. Once hypoglycaemia corrected, restart insulin infusion and consider stepping down the scale			
4.1 - 5.5	**0.2**	**0.5**	**1.0**	
5.6 - 7.0	**0.5**	**1.0**	**2.0**	
7.1 – 8.5	**1.0**	**1.5**	**3.0**	
8.6 – 11.0	**1.5**	**2.0**	**4.0**	
11.1 – 14.0	**2.0**	**2.5**	**5.0**	
14.1 – 17.0	**2.5**	**3.0**	**6.0**	
17.1 – 20.0	**3.0**	**4.0**	**7.0**	
> 20.1	**4.0**	**6.0**	**8.0**	

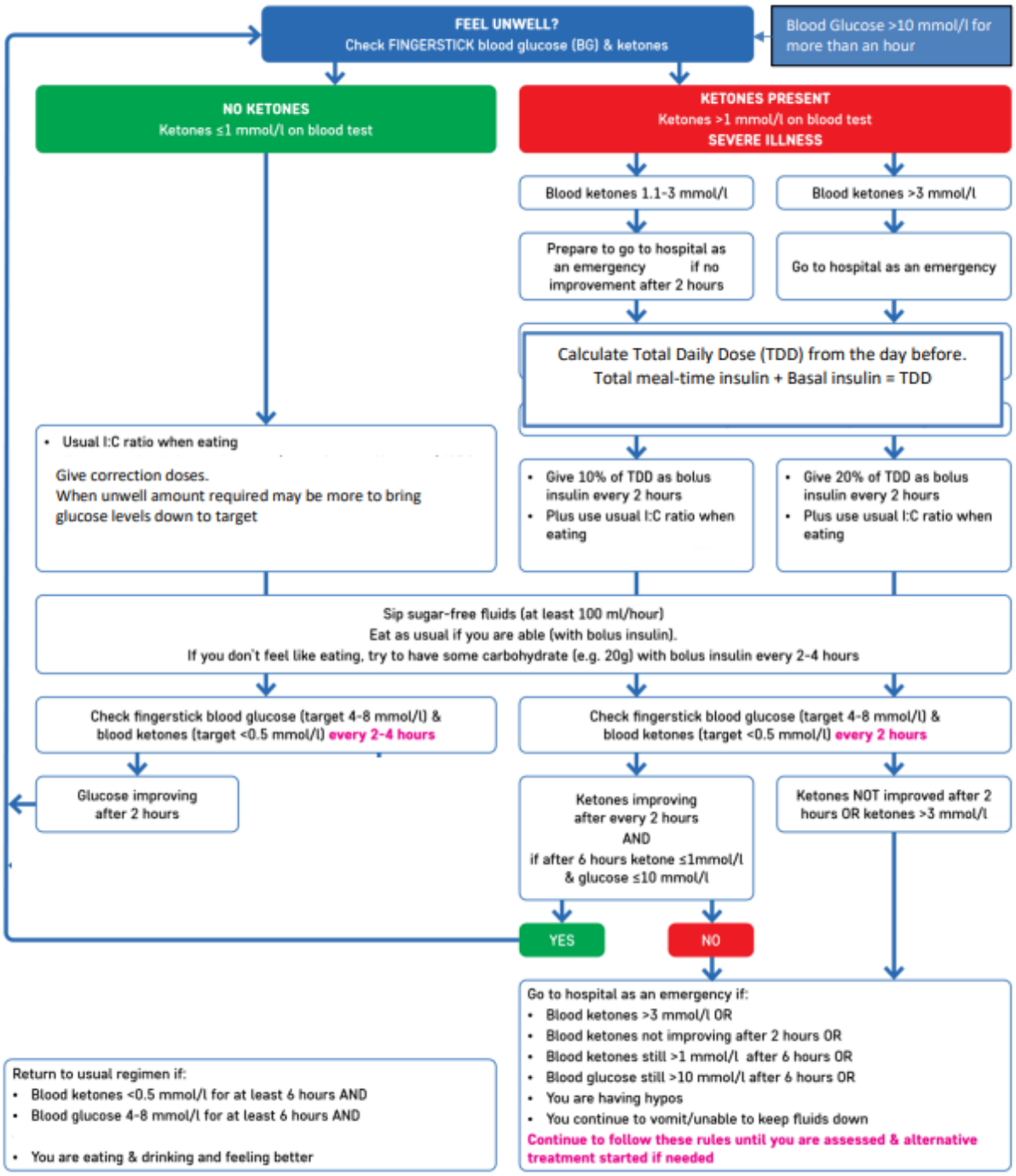
EXAMPLE

Women on **6 units of insulin with meals, and 20units before bed:** the Obstetrician would start the woman on Scale A (see also the table below and appendices)

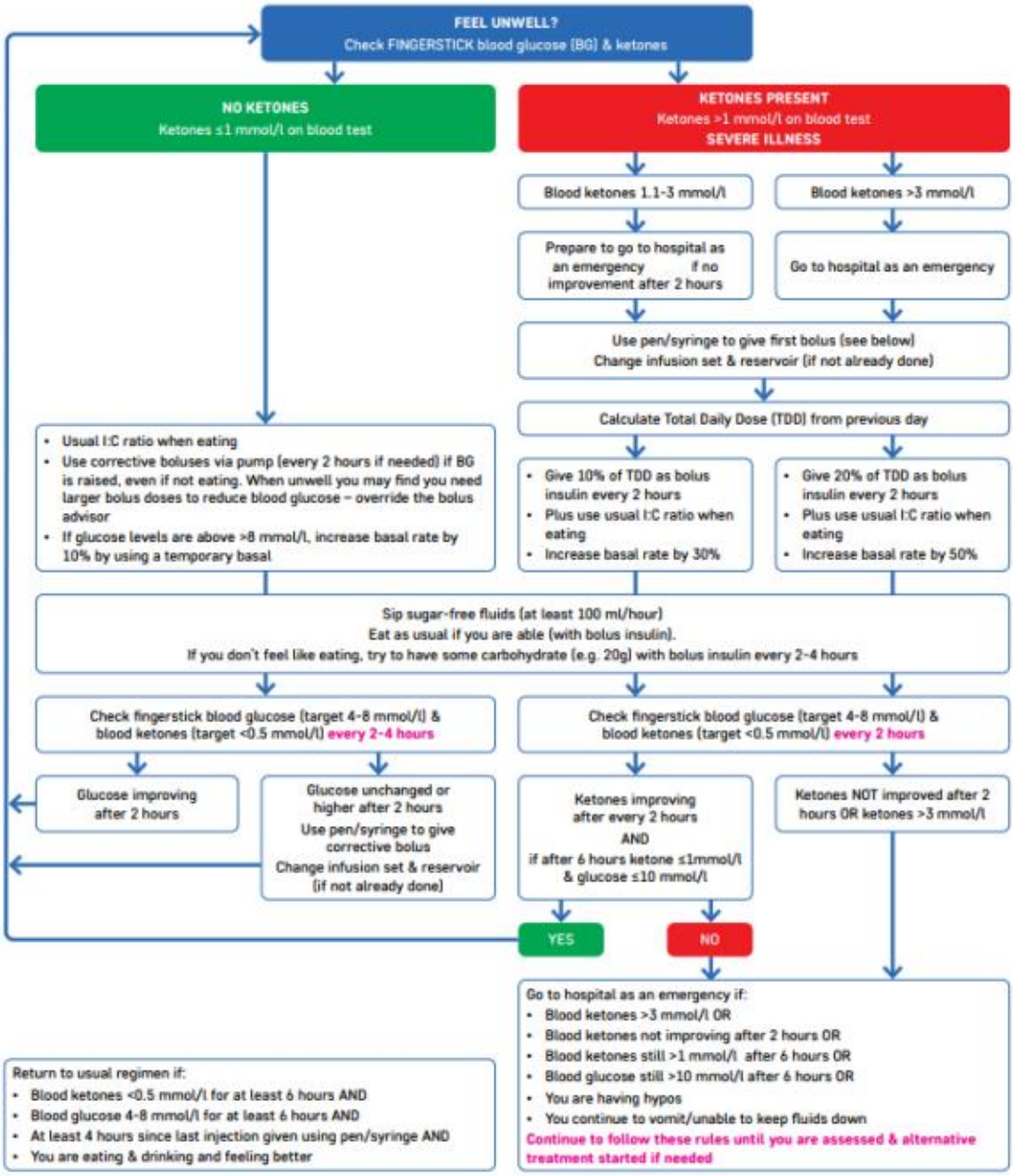
Current daily subcutaneous insulin regimen					
Morning Insulin	**Breakfast Insulin**	**Mid-day meal insulin**	**Evening meal insulin**	**Night time insulin**	**Total daily dose**
Type	Insulin	Insulin	Insulin	Insulin	38 units
Dose in units	6 units	6 units	6 units	20 units	

Appendix 6: Sick day rule examples

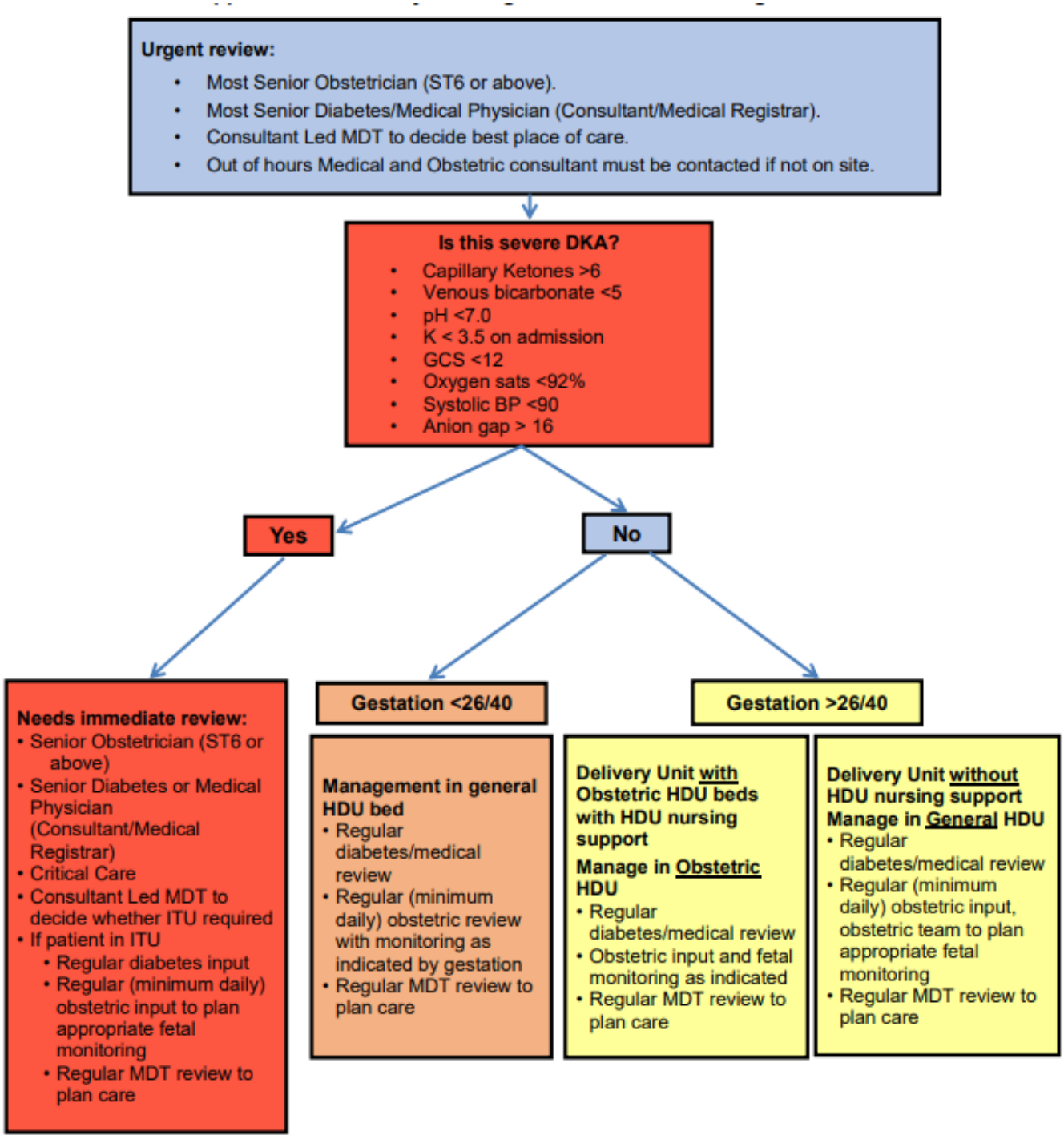
Sick day rules in pregnancy for insulin pen users



Sick day rules in pregnancy for insulin pump users

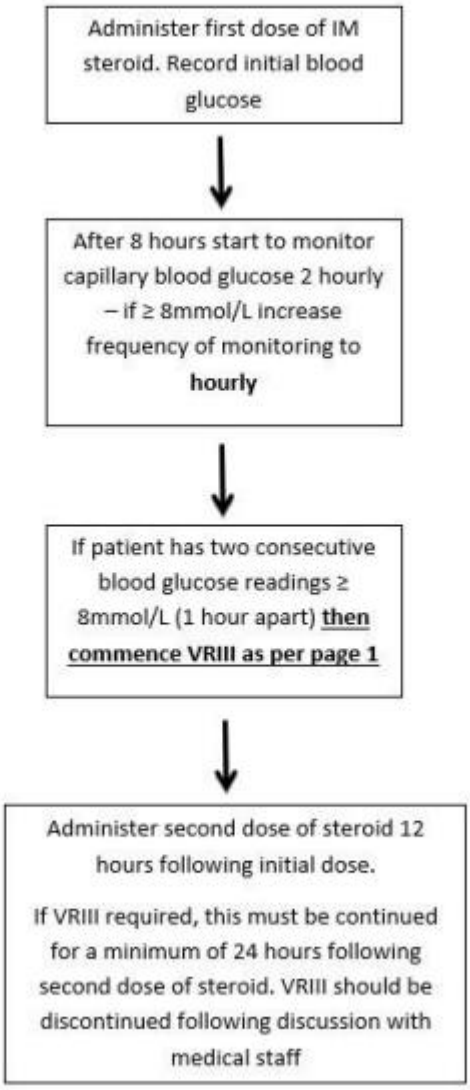


Appendix 7: DKA pathway example



Appendix 8: Guidance for administering steroids for women with diabetes

Guidance for administering steroids for women with diabetes



Appendix 9: Care Plans

Patient Summary at referral

Referrer name:	
Job role	
Referring organisation	

Date	**Patient Details:**
Parity	
Relevant Obstetric History	
Current gestation	
BMI	
First language	**Interpreter required Yes No (please circle)**
EDD	
Next appointment	
Condition & reason for referral	
Diagnosis/Interventions	
Current status of condition	
Relevant Medical/Anaesthetic History	
Medication / Allergies	

Thromboprophylaxis	
Patient individual preferences/comments	

MDT Summary

Name	
DOB	
Hospital No	
MDT attendees	
Diagnosis Include: Parity, Condition, Medication	
Investigations	
MDT Discussion	Plan: Actions: Outcome:
Antenatal Plan	
Intrapartum recommendations **(include place of delivery)**	
Postpartum recommendations	
Anaesthetic considerations	
Neonatal considerations	
Outstanding actions/investigations	
Plan in the event of an emergency	

Contact details	Generic MMC e-mail: MMC midwife: MDT co-ordinator:

Birth Plan

Patient Name:		
Hospital & NHS Number:		
Address		
Date of Birth		
Allergies:		
Condition/Diagnosis		
EDD		
Obstetric History (Including CS)		
Medical/Surgical History		
Medications		
Planned mode of delivery **(date of elective C/S or IOL if applicable)**		
Staff alert: On call Consultant Obstetrician and Labour ward coordinator to be informed on admission for all Red and Amber patients		Please circle the tick as appropriate ✓ Red Cat A: inform all on call staff immediately on admission, immediate HDU care ✓ Amber Cat B: Inform on call team within 4 hours ✓ Green Cat C: routine care with attention to care plan
Anaesthetic review recommendations		
LSCS	Indication	If labours spontaneously
	Location	Location post op
Induction (continued on next page)	Location-	
	Oxytocin regime	

	Considerations/recommendations: -Fluids -Additional monitoring & frequency -Thromboprophylaxis plan	
Vaginal delivery	Special considerations/recommendations: First stage – Second stage –	
Third stage	Usual management or other recommendations: Drugs to avoid:	
Post-delivery Please Circle as appropriate and add comments	Stay on ITU	Yes / No
	Stay on labour ward (how long?)	Yes / No
	Stay in hospital (how long?)	
	Medication plan (breastfeeding considerations)	
	Daily examination by Doctor -	Yes / No
	State investigations before discharge	
	Thromboprophylaxis	Yes / No Dose & Duration
	PN follow arranged/planned	Yes / No
Contact Details	Generic MMC e-mail:	
	MMC midwife:	
	MDT co-ordinator:	

Appendix 10: Contraception

Greater Manchester and Eastern Cheshire	Sexual and Reproductive Health team at The Hathersage Centre on telephone no. 0161 701 1555 Alternatively, patients can identify their nearest clinic using the following link https://mft.nhs.uk/mri/services/northern-sexual-health-service/
Cheshire and Merseyside	Specialist contraceptive advice can be obtained through Axess sexual health clinic (0300 323 1300). Patients with a Liverpool GP can also self-refer to the PCN hub (clpcn.co.uk). Alternatively, patients can identify their nearest clinic using the following link https://www.axess.clinic/find-service/
Lancashire and South Cumbria	Patients can identify their nearest clinic using the following link https://lancashiresexualhealth.nhs.uk/find-nearest-centre/

References

The National Pregnancy in Diabetes Report (2023) - https://digital.nhs.uk/data-and-information/publications/statistical/national-pregnancy-in-diabetes-audit
NICE 2015 - https://www.nice.org.uk/guidance/ng3/
NICE TA943- https://www.nice.org.uk/guidance/TA943
NICE QS 208 - https://www.nice.org.uk/guidance/qs208
Saving Babies Lives Care Bundle v3 (2023) - https://www.england.nhs.uk/wp-content/uploads/2023/05/PRN00614-Saving-babies-lives-version-three-a-care-bundle-for-reducing-perinatal-mortality.pdf
GMMMG Feb 2021 - https://gmmmg.nhs.uk/wp-content/uploads/2021/08/GMMMG-FreeStyle-Libre-recommendation-Feb-21-FINAL.pdf
NICE Diagnostic Assessment Guidance 2022
JBDS_03Guideline for Perioperative Care for People with Diabetes Undergoing Elective or emergency Surgery: https://abcd.care/sites/default/files/site_uploads/JBDS_Guidelines_Current/JBDS_03_CPOC_Diabetes_Surgery_Guideline_Updated_2022.pdf

Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the group to identify where a policy or service may have a negative impact on an individual or particular group of people.

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Diabetes in Pregnancy Guideline
Directorate and service area:	Maternal Medicine Network NW Regional Guideline
Is this a new or existing Policy?	New
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Charlotte Bryant NW MMN Manager
Contact details:	Charlotte.bryant11@nhs.net

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	*This is a North West Guideline aimed at all health care providers who provide care to women before the birth of their baby, during pregnancy and in the postnatal period.* *The guideline also aligns itself to the wider NHS Maternity agenda, Saving Babies Lives and other maternal medicine guidelines.*
2. Policy Objectives	• *To align and standardise diabetes care across the North West region and ensure care is tailored to women and their health and social care needs* • *Reduce Health inequalities.* • *Strengthen local expertise.* • *Improves clinical outcomes and reduces risk.*
3. Policy Intended Outcomes	*Embed the policy across the North West* *Improve data reporting for women with diabetes* *Improve clinical outcomes.* *Improve service user experience*
4. How will you measure each outcome?	*NPID data and audit of NW data*

Information Category	Detailed Information
5. Who is intended to benefit from the policy?	*Women with diabetes accessing maternity services within their local maternity provider or at the regional maternal medicine centre.*
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: *Yes* • Patients/ visitors: *Yes* • Local groups/ system partners: *Yes* • External organisations: *No* • Other: *Yes*
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** *All North West Maternity Providers inclusive of midwifery, obstetric, diabetic specialist teams at provider site* *Diabetes Leads* *Neonates* *Specialist nurses* *North West Maternity and Neonatal Voice Partnership Leads*
6c. What was the outcome of the consultation?	*Building collaborative partnerships to co-produce this guideline*
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys:** The National Pregnancy in Diabetes Report (2023) - https://digital.nhs.uk/data-and-information/publications/statistical/national-pregnancy-in-diabetes-audit NICE 2015 - https://www.nice.org.uk/guidance/ng3/ NICE TA943- https://www.nice.org.uk/guidance/TA943 NICE QS 208 - https://www.nice.org.uk/guidance/qs208 Saving Babies Lives Care Bundle v3 (2023) - https://www.england.nhs.uk/wp-content/uploads/2023/05/PRN00614-Saving-babies-lives-version-three-a-care-bundle-for-reducing-perinatal-mortality.pdf NICE Diagnostic Assessment Guidance 2022

7. The Impact
Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be

consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	*No*	*Any person of childbearing age*
Sex (male or female)	*Yes*	*Statement re using the term women*
Gender reassignment (Transgender, non-binary, gender fluid etc.)	*Yes*	*Statement at the start of the guideline developed with co-production group*
Race	*Yes*	*Statement at the start of the guideline developed with co-production group*
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	*Yes*	*Statement at the start of the guideline developed with co-production group*
Religion or belief	*Yes*	*Statement at the start of the guideline developed with co-production group*
Marriage and civil partnership	*No*	
Pregnancy and maternity	*No*	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	*Yes*	*Statement at the start of the guideline developed with co-production group*

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Charlotte Bryant

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