Gloucestershire Hospitals
NHS Foundation Trust

**TRUST CLINICAL POLICY**

In the case of hard copies of this policy the content can only be assured to be accurate on the date of issue marked on the document.

The Policy framework requires that the policy is fully reviewed on the date shown, but it is also possible that significant changes may have occurred in the meantime.

The most up to date policy will always be available on the Intranet Policy web site and staff are reminded that assurance that the most up to date policy is being used can only achieved by reference to the Policy web site.

# GESTATIONAL DIABETES

**A1005**
**AN 04**

Date of Issue: August 2010 V2

Review Date: August 2013

# GESTATIONAL DIABETES

## 1. INTRODUCTION

1.1 Gestational Diabetes Mellitus

1.1.1 There is no consensus on the definition, management or treatment of gestational diabetes mellitus (GDm).

## 2. PURPOSE

2.1 The aim of this guideline is to inform and provide guidance to staff on recognition and management of GDm in pregnant women.

## 3. ROLES AND RESPONSIBILITIES

3.1 All midwives and obstetricians will utilise the guidance within this document to provide the best evidence based care.

## 4. DEFINITIONS

4.1 GDm may be defined as: [1]

a/ An intolerance of carbohydrate of
b/ Variable severity
c/ With an onset or first recognition during pregnancy
d/ Requiring treatment with Insulin
e/ That may persist after the pregnancy has ended

## 5. COMPLICATIONS AND RISKS

5.1 GDm results in fetal macrosomia with an increased likelihood of adverse outcomes such as;

a/ Birth trauma (shoulder dystocia etc)
b/ Delivery by LSCS
c/ Induction of labour
d/ Neonatal complications such as;

- Hypoglycaemia
- RDS
- Hypomagnesaemia
- Polycythaemia
- Hyperbilirubinaemia [2,3]

5.2 It is also important to remember that;

a/ GDm has been reported to occur in subsequent pregnancies with a frequency of 20 – 50%
b/ Long term maternal complications include a 50% chance of developing type II diabetes within 10 years. [4]

5.3 Women may be at above average risk of developing GDm should the following risk factors be identified;

a/ First degree relative with diabetes (type I or type II)

b/ Afro-Caribbean, South-east Asian, Middle Eastern Ethnic groups
c/ Previous large for gestational age baby (>4.5 Kg)
d/ Previous unexplained stillbirth
e/ A biochemical diagnosis of polycystic ovarian syndrome pre-pregnancy
f/ Obesity (BMI >35 – calculated (Kilograms / height in meters$^2$)

5.4 Currently it is not the recommended practice to routinely screen antenatal samples of urine for glycosuria.[5] However, should glycosuria be detected on more than 2 occasions on samples of urine provided **in the fasting state**, then a GTT may be indicated. (Up to 11% of an unselected population have glycosuria – only 1% of whom will have an abnormal GTT).

## 6. RECOMMENDATIONS FOR PRACTICE

6.1 A GTT should be performed as soon as possible (between booking and 20 weeks gestation) with ***repeated testing*** at 28 weeks gestation for those patients with 2 or more of the risk factors in the list above.

6.2 For those patients with only **one** identifiable risk factor a GTT should be performed between 24 and 28 weeks gestation.

6.3 The WHO currently supports the use of a 75g, 2-hour glucose tolerance test (OGTT) to aid in the diagnosis of GDm. [(6)] This is a screening test, with GDm being confirmed if;

6.3.1 The fasting blood glucose is: $\geq$ 7.1 mmol/l

6.3.2 The 2-hour value is: $\geq$ 7.8 mmol/l

6.4 An abnormal result should warrant blood sugar monitoring, dietary advice $\pm$ treatment with insulin. (N.B The same advice applies to any random blood sample of >11.1 mmol/l)

6.5 Women who have had gestational diabetes in a previous pregnancy should be offered early self-monitoring of blood glucose (Home blood glucose monitoring HBGM) or an OGTT at 16–18 weeks, and a further OGTT at 28 weeks if the results are normal.

6.6 Referral to the diabetes team is not indicated should an 'abnormal' result be obtained at GTT performed at > $35^{+0}$ weeks gestation (for clinical indications e.g. polyhydramnios). However, discussion with a consultant obstetrician must take place concerning the further management of the pregnancy – especially concerning induction of labour at term.

6.7 All patients with gestational diabetes must have a fasting blood sugar checked by their GP at 6 weeks post partum (Please inform the team in the MAC (CGH) or DAU (GRH) if there are problems encountered with arranging this).

6.7.1 Contact details;

a/ GRH
- Dr Mahajan's secretary : 08454 226276
- Specialist registrar in diabetic medicine: bleep 2130
- Diabetes specialist nurses – extension 5274 / 5294
- DAU (Day Assessment Unit) : 08454 226104

b/ CGH
- Dr Gray's secretary : 08454 223680
- Diabetes specialist nurses – extension 4266
- MAC (Maternity Assessment Centre) : 08454 224373

## 8. AUDIT

8.1 Compliance with guidelines

8.2 Outcome of pregnancies with abnormal GTT

8.3 Outcome of pregnancies following referral for GTT but with normal GTT result

8.4 Cost effectiveness of current OGTT regimen

## 9. DISSEMINATION

9.1 The Practice Development Midwife will inform all staff via a newsletter when this guideline has been uploaded and individuals are expected to make themselves aware of the guideline content via the intranet store.

## 10. MONITORING OF COMPLIANCE

10.1 Please see Monitoring of Compliance appendix (This list is not exhaustive and additional criteria may be included at the Trust discretion)

10.2 Frequency and time scale of audit is the maximum time between audits and may be shortened if the Trust deem necessary.

10.3 Audit will be carried out as frequently as is deemed necessary by the relevant bodies in the maternity services.

10.4 Sample sizes selected will be dependent on the cohort size.

10.5 Action plans will be developed and reviewed as required by the instigating body.

## 11. REFERENCES


1. Metzger BE, Coustan DR. Summary and recommendations of the fourth international workshop-conference on gestational diabetes mellitus. Diabetes Care 1998; 21(suppl 2): B1617

2. Meltzer S, Leiter L, Daneman D, Gerstein HC, Lau D, Ludwig S, et al. Clinical practice guidelines for the management of diabetes in Canada. Canadian Diabetes Association. Can Med Assoc J 1998; 159(suppl 8): S1-29

3. Persson B, Hanson U. Neonatal morbidities in gestational diabetes mellitus. Diabetes Care 1998; 21(suppl 2): B79-B84

4. O'Sullivan JB, Mahan CM. Criteria for the oral glucose tolerance test in pregnancy. Diabetes 1964; 13: 278-285

5. Clinical Guideline 6. Antenatal care. Routine care for the healthy pregnant woman. NICE. www.nice.org.uk

6. World Health Organisation. Diabetes mellitus: report of a WHO study group. Geneva: WHO, 1985

7. NICE guidelines CG 63.

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# Monitoring of Compliance (MoC) Form - Guideline A1005 (AN 04) Gestational Diabetes

| [1] Type of monitoring | [2] Objective to be measured | [3] Frequency/ Timescale | [4] Lead responsible | Action plan on outcome |
|---|---|---|---|---|
| D Audit: Retrospective case note review<br><br>Women with gestational diabetes over a one year timeframe.<br><br>~60 sets of casenotes will be reviewed, with a weighting of notes per site at a level comparable to deliveries. | Audit of Guideline AN 04 Gestational Diabetes, which as a minimum will include:<br>• If two or more risk factors are present (as per section 5.3) a GTT will be performed as soon as possible (between booking & 20wks gestation) and repeated at 28 weeks (as per section 6.1)<br>• If one risk factor is present (as per section 5.3) a GTT will be performed between 24 and 28 weeks gestation (as per section 6.2)<br>• An abnormal GTT result will result in discussion of the case with a consultant obstetrician (as per section 6.6)<br>• All patients with gestational diabetes will have a fasting blood sugar checked by their GP at 6 weeks post partum (as per section 6.7) | Tri annual<br><br>As a minimum, unless clinically indicated via the clinical incident reporting datix system or in order to comply with directives from external bodies i.e. NHSLA. | Audit Lead<br><br>With assistance from Audit dept where required | To be presented at the first available opportunity at the maternity service teaching and audit afternoon.<br><br>Development of action plan based on levels of compliance found from audit.<br><br>If audit reveals suboptimal compliance and actions are indicated, the standards will be reaudited once the actions are in place and an appropriate period of time has elapsed to ensure embedding of changes – usually 6 months to a year. |

| |
|---|
| [1] A = ACI reporting and collection of data by risk management lead B = Annual Audit/collation of data retrospectively<br>C = Ongoing prospective audit/data collection D = Tri annual audit<br>E = Other (please specify) |
| [2] From local or national standards, or determined by controlling/stakeholder group |
| [3] How often monitoring is to take place – Annual; Tri annual; Other (please specify). |
| [4] May be an individual or group |

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**TRUST CLINICAL POLICIES**

**Authorisation Form**

**DOCUMENT: Gestational Diabetes**

| **Authorisation** | **Name and Position** | **Date Approved** |
|---|---|---|
| Responsible Author/s | Dr R Hayman<br>Consultant Obstetrician | July 2010 |
| Policy Sponsor | Dhushyanthan Mahendran<br>Clinical Director, Obstetrics | July 2010 |
| Policy Assuror | Gloucestershire Obstetric Guidelines Group (GOGG) | July 2010 |

**Consideration at authorised groups (e.g. Board, Board sub committees, Policy Group, Clinical policies Sub Group, Departmental meetings etc)**

| **Name of Group** | **Minute details** | **Date considered** |
|---|---|---|
| Gloucestershire Obstetric Guidelines Group (GOGG) | Item 4.5 | 19th February 2007<br>26th July 2010 |

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# EQUALITY IMPACT ASSESSMENT

## INITIAL SCREENING

1. Lead Name : Hazel Williams
Job Title : Practice Development Midwife

2. Is this a new or existing policy, service strategy, procedure or function? Existing policy

3. Who is the policy/service strategy, procedure or function aimed at?
Patients Staff ✓

4. Are any of the following groups adversely affected by this policy:
If yes is this high, medium or low impact (see attached notes):

| | | | | |
|---|---|---|---|---|
| Disabled people: | No | x | Yes | |
| Race, ethnicity & nationality: | No | x | Yes | |
| Male/Female/transgender: | No | x | Yes | |
| Age, young or older people: | No | x | Yes | |
| Sexual orientation: | No | x | Yes | |
| Religion, belief & faith: | No | x | Yes | |

If the answer is yes to any of these proceed to full assessment.
If the answer is no to all categories, the assessment is now complete.

Date of assessment: 6th August 2010 Completed by: H. Williams
Signature: Job title: PDM
Director: Signature:

This EIA will be published on the Trust website. A completed EIA must accompany a new policy or a reviewed policy when it is confirmed by the relevant Trust Committee, Divisional Board, Trust Director or Trust Board. Executive Directors are responsible for ensuring that EIA's are completed in accordance with this procedure.

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**Learning & Development Department**
**Redwood Education Centre**

# Training Needs Analysis for Gestational Diabetes Completed on 8th August 2010 By H. Williams PDM

| *Level of training required | Staff Group / s | Division / Department | Frequency of training / update | Method of training delivery | Lead and department responsible for provision of training |
|---|---|---|---|---|---|
| A | Midwives | Women and Children's | Once | Cascade via newsletter | Hazel Williams |
| A | Obstetricians | Women and Children's | Once | Cascade via newsletter | Hazel Williams |
| | | | | | |

***Levels of Training**

| | | | |
|---|---|---|---|
| **A = Awareness** (Micro-teach, drop in session, e-learning) | **B= ½ day (2.5 – 3 hours)** (workshop, training event, e-learning) | **C = Full day (5-6 hours)** (workshop, training event) | **D= Course** (more than one day training) |