Gloucestershire Hospitals
NHS Foundation Trust

TRUST CLINICAL GUIDELINE

# FETAL SIZE & GROWTH

**A1022**
**OB US 2**

## 1. INTRODUCTION

1.1 The aim of the obstetric ultrasound guidelines is to ensure access to a uniform obstetric ultrasound programme which conforms to an agreed level of quality. The aim of this protocol is to inform clinicians and sonographers about the ultrasound assessment of fetal size and growth. The fetal charts used to assess fetal size and growth are those recommended by the British Medical Ultrasound Society (BMUS) (BMUS 2009).

## 2. DEFINITIONS

2.1 An ultrasound assessment of fetal morphometric measurements usually performed in the third trimester in situations where there is increased risk or clinical suspicion of growth discordance, or where routine clinical method of growth assessment is unreliable.

## 3. ROLES AND RESPONSIBILITY

| Post/Group | Details | Resources | Review/ Monitoring | Implementation | Records | Reporting |
|---|---|---|---|---|---|---|
| **Midwives** | • following this and associated policies/procedures<br>• taking reasonable care of self and others | | | X | X | X |
| **Obstetric Ultrasound Committee** | • responsible for policy review<br>• examine and assist in the composition of audit reports | | X | | | |

## 4. ASSESSMENT

4.1 For all clinical presentations assess and report on:

4.1.1 Fetal viability

4.1.2 Presentation of the fetus

4.1.3 Placental site

## 5. INDICATIONS FOR ASSESSMENT OF SIZE AND GROWTH

5.1 Women who present with:

- A history of a previous small for gestational age baby (<10 centile)
- Twins / multiple pregnancy - see Ultrasound Management of Twin/Multiple Pregnancies
- Clinically small for gestational age (below 10$^{th}$ centile on symphysis fundal height charts) >3 cm below expected.
- Clinically large for dates (above 90$^{th}$ centile on symphysis fundal height charts)

- Static symphysis fundal height chart measurements (for 3 weeks or more)
- Chronic maternal disease (hypertension, systemic lupus erythematosus, renal disease, diabetes)
- Pregnancy associated hypertension or preeclampsia
- Maternal Body Mass Index (BMI) > 40
- Maternal Body Mass Index (BMI) < 18
- Women with large fibroids.

## 6. ASSESSING SIZE AND GROWTH

6.1 Measure and report:

6.1.1 Head circumference (HC)

6.1.2 Fetal abdominal circumference (FAC)

6.1.3 Femur length (FL)

6.1.4 Liquor Volume (LV) - state as normal if subjectively so

6.1.5 Amniotic Fluid Index (AFI). 4 vertical measurements - one in each quadrant, to be measured if LV is subjectively abnormal. In twins and multiple pregnancies the deepest pool of each foetus is to be measured and reported.

6.1.6 Estimated fetal birth weight (EFBW) if requested.

6.1.7 Fetal stomach and bladder to be indicated as seen.

6.2 All measurements and comments to be recorded on the Computerised Radiology Imaging System (CRIS) obstetric report.

6.3 Doppler study of both umbilical arteries **to only be undertaken** if:

6.3.1 FAC is on or below the 5$^{th}$ centile or there is significantly asymmetric growth

6.3.2. There is a significantly reduced rate of growth on a serial scan

6.3.3 Reduced amniotic fluid with unknown cause (AFI <7cms)

6.3.4 Increased AFI volume (> 28cms or DP >8cms)

6.3.5 Diabetic mother

6.3.6 Chronic / acutely raised BP

6.3.7 If the Doppler is abnormal then it is good practice to assess the MCA Doppler to assess cerebral redistribution, but this may be difficult if the head is deeply in the pelvis.

## 7. INDICATIONS FOR RESCANNING

7.1 Rescan if:

7.1.1 FAC lies on or below 5$^{th}$ centile

7.1.2 Requested as part of a antenatal care plan

7.1.3 Static growth on FAC graph

7.1.4 Reduced amniotic fluid with unknown cause (AFI <7cms.)

## 8. TIMING FOR RESCANS

8.1 FAC/HC should not be measured at less than 2 week intervals, unless there is concern that previous measurement may have been inaccurate (in certain fetal positions and where there is oligohydramnios the accuracy of measurements may be compromised).

8.2 Perform an intermediate scan in one week or as required for LV/doppler study of the umbilical arteries if there is significantly abnormal growth and /or the LV and/or Doppler study of the umbilical arteries. If there is abnormal end diastolic flow (absent or reversed) a consultant should see the result and decide when follow up is required.

8.3 Two scans with normal growth, LV & doppler study of the umbilical arteries do not automatically require a rescan. This will be the decision of the referring clinician. Please include **rescan at your request** on the report.

## 9. TRAINING

| *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, Obstetricians, Sonographers | Women and Children's | Once | Cascade of guideline | Lead sonographer, PDM |

***Levels of Training**

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

## 10. MONITORING OF COMPLIANCE

## 11. REFERENCES

Loughna P, Chitty L, Evans T, Chudleigh T. Fetal Size and Dating: Charts Recommended For Clinical Obstetric Practice Ultrasound 2009;17(3):161–167. British Medical Ultrasound Society 2009.

also at http://www.bmus.org/policies-guides/23-17-3161_ultBMUS.pdfhttp://

## FETAL SIZE & GROWTH – DOCUMENT PROFILE

| DOCUMENT PROFILE | |
|---|---|
| REFERENCE NUMBER | A1022 |
| CATEGORY | Clinical |
| VERSION | 2 |
| SPONSOR | Dhushyanthan Mahendran |
| AUTHOR | Mary Pillai |
| ISSUE DATE | April 2011 |
| REVIEW DETAILS | April 2014 |
| ASSURING GROUP | Obstetric Ultrasound Group (OUG) |
| APPROVING GROUP | Gloucestershire Obstetric Guideline Group (GOGG) |
| APPROVAL DETAILS | April 2005 – OUG<br>September 2007 – OUG<br>06.11.2007 item 4.1.4 – GOGG<br>27.11.2007 item 3.k – Clinical Policy Group<br>05.04.2011 item 4.1.11 - GOGG |
| DISSEMINATION DETAILS | Upload to Policy Site; cascaded via Women and Children's Division |
| EQUALITY IMPACT ASSESSMENT | Added to policy 04.04.11 |
| KEYWORDS | USS, ultrasound, size, growth, fetal morphometric measurements |
| OTHER RELEVANT DOCUMENTS | Ultrasound Management of Twin/Multiple Pregnancies |

Gloucestershire Hospitals NHS
NHS Foundation Trust

# EQUALITY IMPACT ASSESSMENT

## INITIAL SCREENING

1. Lead Name : Hazel Williams
Job Title : PDM

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

3. Who is the policy/service strategy, procedure or function aimed at?
Patients Carers Staff ✓ Visitors
Any other Please specify:

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 | ✓ | Yes | |
| Race, ethnicity & nationality: | No | ✓ | Yes | |
| Male/Female/transgender: | No | ✓ | Yes | |
| Age, young or older people: | No | ✓ | Yes | |
| Sexual orientation: | No | ✓ | Yes | |
| Religion, belief & faith: | No | ✓ | 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: 04.04.11 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