Suspected Large for Gestational Age (LGA) Fetus

(in a non-diabetic pregnancy)

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Contents

Scope

This guidance is for all pregnant women accessing the maternity services within Swansea Bay University Health Board (SBUHB). The objective is to support midwives, obstetricians and other multi-disciplinary practitioners to deliver seamless and well-informed care when a fetus is suspected of being Large for Gestational Age (LGA) in the absence of maternal diabetes.

There is an immense amount of research and evidence surrounding this topic and the most recent and relevant to the UK has been reviewed. The policy includes the pertinent points to use in discussion with women. An at a glance section will be added to inform the Multidisciplinary team how we manage a woman with a suspected LGA fetus in the absence of Gestational Diabetes Mellitus (GDM).

Policy at a glance

For clarity within SBUHB, Large for Gestational Age (LGA) will be defined as a fetus who has an Estimated Fetal Weight on USS greater than the >97th centile at/or after 36 weeks gestation.

This aligns with GROW 2.0 charts and for the gestational diabetes screening if warranted from the findings of an ultrasound scan.

- Any fetal growth scan over 26 weeks with **incidental finding** of an EFW over the 97th centile, offer diabetic screening.
- Suspected polyhydramnios at any gestation requires a scan and if identified on any scan findings, follow SBUHB polyhydramnios policy.
- If EFW over the 97th centile the All-Wales place of birth (Pathway 2) recommends individual birth planning as per Pathway B. EFW >97th centile is not an exclusion for a recommendation of a midwifery led birth, but individual assessment is indicated .
- Acknowledge that there are predictive values surrounding ultrasound scanning that affect the accuracy.
- Once identified as LGA an obstetric ANC appointment should be arranged before 38+0. Where this cannot be facilitated the woman should be reviewed via ADAU.
- Women identified with an LGA fetus should receive appropriate counselling. Further knowledge can be obtained in the policy if the woman requests more information. There is a counselling proforma to print off and complete with her and place in her maternity notes. This can be revisited if the woman requests it. Use BRAIN within the proforma to assist with the decision-making process on mode/place of birth.
- This policy does not recommend early term induction of labour or caesarean birth for suspected LGA, alone but each woman should have the opportunities to discuss any concerns and an individualised plan to be made (NICE). Ensure documentation is clear and her plan for birth is understood.

Background

The average birthweight has increased in the UK and abroad over the last 30 years, partly attributed to the increased prevalence of maternal obesity and gestational diabetes (McMurrugh, Viera & Sankaran, 2024). Approximately, 10% of all pregnancies result in fetal macrosomia, but this estimate ranges from 3 to15% (Mohammadbereigi et al, 2013).

The much anticipated 'Big Baby' trial data has been published. The research team conducted a Randomised Controlled Trial (RCT) to investigate the potential benefits and harms of induction of labour from 38 weeks' gestation to reduce the risk of shoulder dystocia and provide data to help pregnant women with suspected large babies (and their clinicians) make informed choices.

It is worth noting that the trial was carried out between June 8, 2018, and Oct 25, 2022, 2893 women were randomly assigned to induction of labour (n=1447) or standard care (n=1446); the trial was terminated before the target of 4000 participants was reached on advice of the data monitoring committee (Gardosi, et al 2025). Where relevant reference to this new research will be highlighted. However, despite the trial having a large number of participants it was stopped prematurely by the data monitoring committee due to the covid-19 pandemic, where recruitment had decreased significantly during this time.

The definitions of 'Large for Gestational Age' fetus, macrosomia, or fetal overgrowth is widely debated. According, to the National Institute for Clinical Excellence (NICE, 2021) fetal macrosomia describes a fetus that is believed to be large for its' gestational age, with an Estimated Fetal Weight (EFW) above the >95th centile, at or after 36 weeks of pregnancy. The Royal college of Obstetricians and Gynaecologists (RCOG, 2012) identify macrosomia as an EFW greater than >4.5kg, with this cut off limit appearing to have the strongest association in terms of fetal outcomes.
Other research suggests to restricting the definition to a weight higher than the >97th centile, because this is more accurately identifies newborns at greater risk of perinatal mortality and morbidity (Damhuis, Ganzevoort & Gordijn, 2021) The 97th centile is the value utilised in other All Wales guidance (MNNN 2020).

However, the reported risks of suspected LGA cases may be biased because of selective ultrasound usage, variable definitions of LGA and variable clinical management. Furthermore, analysis of risk has been performed mainly according to birth weight rather than estimated fetal weight (EFW) on ultrasound. (Robertson et al, 2023). The value of USS lies in the prediction of SGA/IUGR and the reduction of stillbirth.

In addition, there is also evidence that LGA, as defined by a customized standard, has a stronger association with LGA-related adverse outcomes, and that it identifies additional large babies at risk that would not be identified by population-based standards (González-González et al, 2015).
The main risk factors for LGA include obesity, Gestational Diabetes Mellitis (GDM) and gestational weight gain. These conditions increase the circulating maternal glycaemia and materno-fetal glucose transfer across the placenta and is the main factor responsible for fetal growth. (Viera, Sankaran & Pasupathy, 2020).

Gestation Related Optimal Weight - 2.0 and Identification of LGA
SBUHB have adopted the digital GROW 2.0 system to for the management of customised fetal growth surveillance.

The system uses an alert icon in the form of a flower which identifies if the woman requires growth surveillance via serial scanning. The Growth Assessment Protocol (GAP) suggest three weekly intervals for serial scans. (Appendix 3) Then **no** Fundal Height Measurements (FHM) are to be performed. If a woman is identified as not requiring serial scanning FHM's are to commence from 26-28 weeks gestation.

The system automatically places the **3rd, 10th, 50th, 90th and 97th** on the individualised chart that is created using the woman's height, weight, ethnicity and previous birthweights to generate the curve. The charts do not delineate towards fetal sex during pregnancy and once the baby is born the chart will automatically adjust according to the baby's sex and the customised curve will alter.

FHM's are an estimate of the size and measurement the uterus and all of its contents. It is important that the clinician is competent and as accurate as they can be in their technique, continuity of midwifery carer may reduce practitioner error. Measuring from the top of the fundus to the pubic bone along the fetal pole and that the measurement taken should not rounded up or down. (If it reads 33.4cm this is what should be documented on the chart). Ensure that the maternal bladder is empty and that they are lying at a 30° angle. The objective of undertaking serial FHM is to assess the fetus is growing well and following a normal growth trajectory. Where there are deviations follow the GROW 2.0 prompts and refer for a scan as per local guidance.

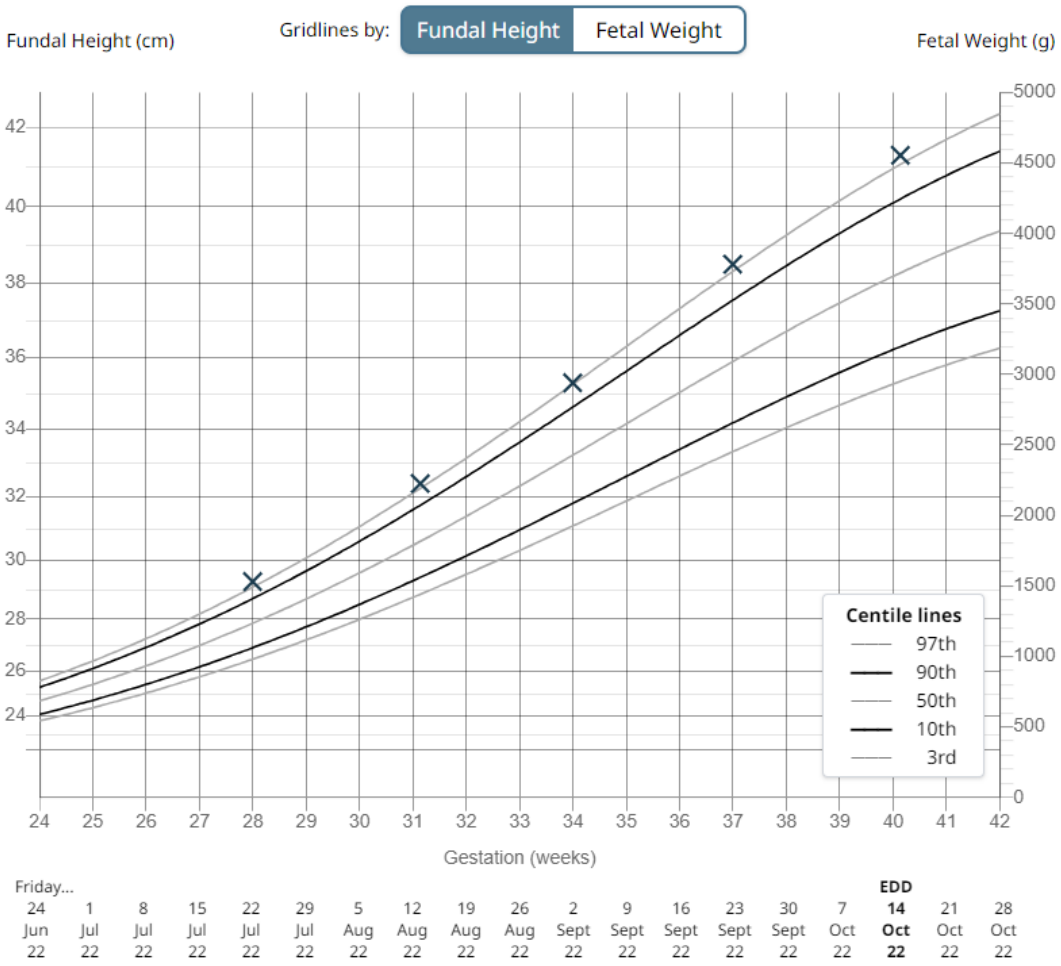
https://perinatal.org.uk/FetalGrowth/FundalHeightmeasurement

Please remember to use clinical judgement and if unsure the midwife sonography team are always available for support.

SBU.Midwifescanreferrals@wales.nhs.uk (01792) 704075 Ext: 34075

SBU.NPTMidwifeScanReferrals@wales.nhs.uk (01639) 742021 Ext: 42021

This chart illustrates normal growth pattern trajectory and does not require a scan referral. (As per Perinatal Institute guidelines, 2023).



An individual FHM over the 97th centile does <u>not</u> require a referral for an ultrasound scan (USS) unless there are any other concerns such as suspected polyhydramnios.

If GROW 2.0 has indicated **<u>accelerated,</u>** (i.e.: the trajectory is excessive against the previous FHM- this will be automatically generated) growth after 36 weeks gestation then refer to the midwife sonographers for a growth scan. These scans can be performed within 72 hours or 3 working days. Avoid using words like urgent and emergency scan as it causes unwarranted anxiety.

Khan, et al (2019) conducted a study which they found that the predictive performance for a LGA fetus with fetal biometry at 35+0 to 36+6 weeks' gestation is far superior to that of a fetus at 31+0 to 33+6 weeks is consistent with the results of two previous studies by Souka, et al (2013) and Frick, et al (2016).Once the scan is completed and the EFW is <97th centile the woman continues her routine antenatal care and her next FHM should follow the last measurement on the same trajectory and that would **<u>not</u>** require a further scan.

If polyhydramnios is suspected after 26 weeks, women are to be referred for a scan to the midwife sonographers (unless already having serial growth scans). If polyhydramnios is reported on the scan, follow the SBUHB polyhydramnios policy. If the EFW is plotted >97th centile under 36 weeks gestation as an incidental finding in a scan performed for a different referral reason, the midwife sonographer will follow the SBUHB screening for gestational diabetes pathway (Appendix 1) and offer the woman an Oral Glucose Tolerance Test (OGTT) under 34/40 or a HBA1C and fasting glucose blood test over 34/40 and home blood glucose monitoring. If scanned by radiology department the radiographer will refer the woman to Antenatal Day Assessment Unit (ADAU) to arrange screening unless the woman is being seen in ANC by an obstetrician.

Depending on gestation a consultant antenatal appointment will need to be made. This should occur before 39+0. Give time for the OGTT/home blood glucose testing to come back for gestational diabetes, as this will determine which clinic the woman is suitable to be referred into. If an appointment cannot be facilitated (because of clinic capacity or the woman's gestation when LGA is identified) then she should be seen via the Antenatal Assessment Unit (AAU) or Antenatal Day Assessment Unit (ADAU). It is important to avoid rushing the woman and partners decision. Ensure use of the antenatal counselling proforma to document the discussion.

Alternatively refer to the Lead community midwife for the team via email the woman is being cared for:

SBU.communitymidwives-UpperValley@wales.nhs.uk

SBU.communitymidwives-Nedd@wales.nhs.uk

SBU.communitymidwives-Bay@wales.nhs.uk

SBU.communitymidwives-City@wales.nhs.uk

SBU.communitymidwives-Cwmtawe@wals.nhs.uk

SBU.communitymidwifery-Afan@wales.nhs.uk

SBU.communitymidwifery-Llwchwr@wales.nhs.uk

SBU.communitymidwifery-Penderi@wales.nhs.uk

Alternatively, the consultant midwife via her online referral form to gain her opinion.

SBU.ConsultantMidwife@wales.nhs.uk

Comprehensive discussion
In 2015, a Supreme Court ruling, Montgomery V Lanarkshire highlighted the importance of counselling women with suspected fetal macrosomia.

NICE released a guideline in 2021 on the management of large for gestational age. They recommended a comprehensive discussion of the risks and benefits of all options (expectant management, induction of labour and elective caesarean) with the women and her partner, to enable informed decision making.

When giving women (and their partners) information about antenatal care, use clear language, and tailor the timing, content and delivery of information to the needs and preferences of the woman and her stage of pregnancy. Information should support shared decision making between the woman and her healthcare team, and be:

- Offered on a one-to-one basis
- Supplemented by group discussions (women only or women and partners)
- Supplemented by written information in a suitable format, for example, digital, printed, braille or Easy Read.
- Offered throughout the woman's care.
- Individualised and sensitive.
- Supportive and respectful.
- Evidence-based and consistent.
- Translated into other languages if needed. (NICE, 2021)

Use the Brain pneumonic to structure your discussion.

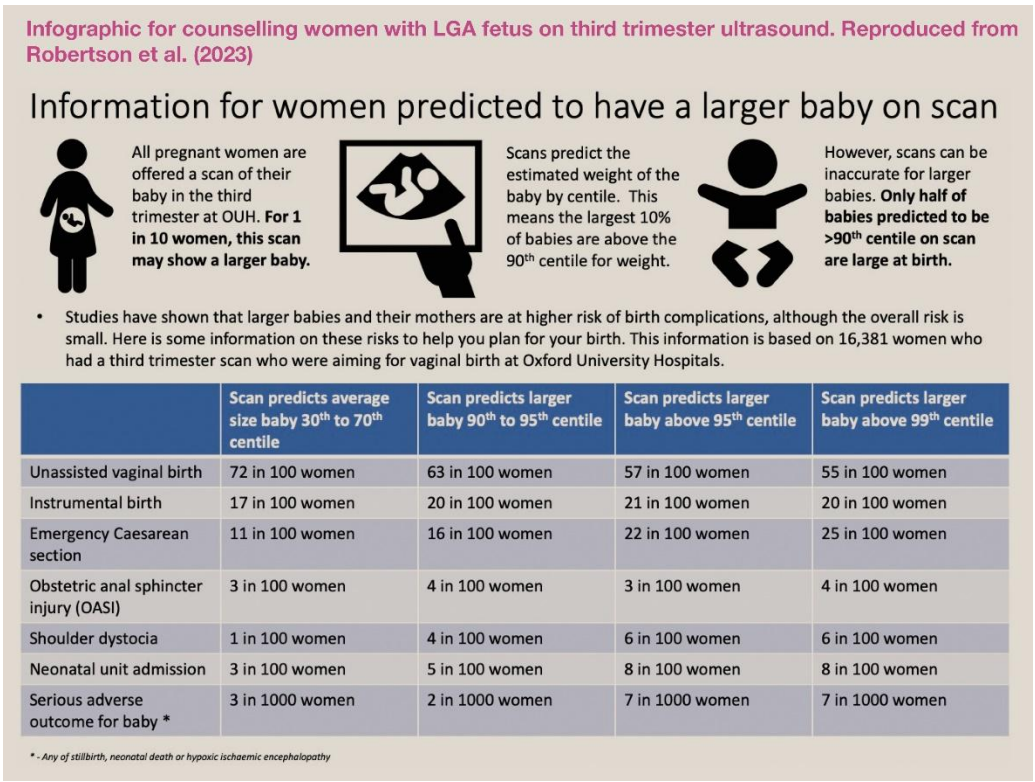
Antenatal counselling and discussion

The findings of the 'big baby' study, as well as its limitations, provide information that can be communicated to pregnant women with a suspected LGA fetus, to assist them in making choices about mode and timing of their delivery. First, they should be made aware that ultrasound assessed fetal weight is an estimate only, with substantial margins of error. Second, the potential short-term and long-term risks and benefits should be discussed with regard to the different delivery pathways. Third, our study supports previous reports (Boulivan et al, 2016, Magro-Malosso, 2017) that, compared with delivery at 39 weeks' gestation or later, earlier delivery can reduce the risk of shoulder dystocia. (Gardosi et al, 2025).

- Discuss the available birth settings available to the woman (Home, alongside midwifery unit , free standing midwifery unit birth centre, Obstetric unit). Discuss the differences in models and the advantages and disadvantages of this variation.
- In most instances vaginal birth would be the recommendation, Unless the predicted EFW where over 5KG at term where RCOG would recommend caesarean birth in the non-diabetic mother. NICE recommends consideration and discussion of induction of labour with appropriate counselling, caesarean birth in this instance would be maternal choice not clinical indication
- Where the EFW via USS is ≥97th centile, with a normal OGTT and an otherwise uncomplicated pregnancy. An individualised discussion and assessment should be carried out, using the BRAIN pneumonic and discuss the place of birth.

- Where the EFW is ≥97th centile with any other pregnancy complications or risk factors, there may be benefits to midwifery led birth settings as per the All Wales Place of Birth Assessment.

Infographic for counselling women with LGA fetus on third trimester ultrasound. Reproduced from Robertson et al. (2023)



	Scan predicts average size baby 30th to 70th centile	Scan predicts larger baby 90th to 95th centile	Scan predicts larger baby above 95th centile	Scan predicts larger baby above 99th centile
Unassisted vaginal birth	72 in 100 women	63 in 100 women	57 in 100 women	55 in 100 women
Instrumental birth	17 in 100 women	20 in 100 women	21 in 100 women	20 in 100 women
Emergency Caesarean section	11 in 100 women	16 in 100 women	22 in 100 women	25 in 100 women
Obstetric anal sphincter injury (OASI)	3 in 100 women	4 in 100 women	3 in 100 women	4 in 100 women
Shoulder dystocia	1 in 100 women	4 in 100 women	6 in 100 women	6 in 100 women
Neonatal unit admission	3 in 100 women	5 in 100 women	8 in 100 women	8 in 100 women
Serious adverse outcome for baby *	3 in 1000 women	2 in 1000 women	7 in 1000 women	7 in 1000 women

** - Any of stillbirth, neonatal death or hypoxic ischaemic encephalopathy*

Ultrasound accuracy

During discussions surrounding the EFW of the fetus there should be information relayed about the accuracy of the scan:

- A population-based cohort study showed that fetuses that were suspected of LGA by FHM and were scanned had a Positive Predictive Value (PPV) of 50.3%. Suggesting that clinical suspicion improves antenatal detection. As all other scans such as serial scans had a PPV of 41%. Ultrasound estimation of fetal weight between 35-38 weeks gestation has a good ability to detect LGA birthweight. However, clinicians need to be aware and inform women of the limits of the accuracy of ultrasound assessment. (Ewington et al, 2024).
- Ridha et al (2022) found scan error because of apparent EFW overestimation at both ends of the spectrum which resulted in different diagnostic effects. 58% of fetuses with an EFW >90% were not LGA at birth, indicating a high false positive rate.
- Once a ‘large’ baby has been predicted by scan, pregnant women and their caregivers are forced onto the philosophical dilemma of whether a ‘large’ baby is a normal variation of a healthy pregnancy, especially in the absence of any confounding clinical reason for largeness, such as diabetes (Baddington, Parker & Wakelin, 2023).
- A limitation of the ‘Big Baby trial’ was the poor predictive value of scan estimated fetal weight for LGA at birth, which became evident through the ability to use the same GROW standard antenatally and postnatally. The high false positive rate is consistent with evidence from other studies, (Monier, et al 2022) but could also be an overestimate if the largest babies were being delivered earliest after their scan. However, risk of shoulder dystocia is also

directly related to high EFW at scan, regardless of birthweight (Robertson, et al, 2024). Preliminary evidence suggests that assessment of fetal growth velocity can make an important contribution to antenatal identification of shoulder dystocia risk in babies who are not LGA.36 More work is required to understand the apparent systematic overestimation of LGA fetal weight late in the third trimester (Gardosi, et al 2025).

It is therefore paramount to reassure women that most babies who are large for gestational age on birth weight are born vaginally with no complications.

Complications of an LGA:
Within the available literature there is a clear association with macrosomia including;

- The need for a caesarean birth.
- Postpartum haemorrhage.
- Third- and fourth-degree tears.
- Shoulder dystocia.
- Low Apgar scores.
- Hypoglycaemia.
- Admission to Neonatal intensive care unit.
- Severe neonatal morbidity and perinatal mortality.

(McMurrgh, Viera & Sankaran, 2024).

Neonatal complications could include fractures of the clavicle and humerus, brachial plexus injury, hypoxic ischaemic encephalopathy and death (Ewington et al, 2022). The findings of the 'Big Baby' trial observed that the proportion of babies with the composite outcome of intrapartum birth injury (a fracture, brachial plexus injury, or both) did not significantly differ between the induction of labour study group and the standard care group. (Gardosi et al, 2025).

Birth options
Once a woman has been appropriately counselled the clinician will need to complete the antenatal counselling proforma to document the discussion and ensure the woman has made an informed choice on how and where she wishes to birth. Ensure this is available in the handheld maternity notes for reference.

NICE (2021) Inducing labour guideline recommends that women a suspected LGA fetus are offered options of expectant management, induction of labour before term and elective caesarean birth.

<u>Expectant management or Induction of labour</u>
Early induction of labour (IOL) between 37 and 39 weeks' gestation has been suggested to mitigate against the complications of birthing an LGA fetus. However, even though the largest Randomized Controlled Trial (RCT) on the management of suspect LGA pregnancies conducted to date found that early IOL reduced the incidence of severe shoulder dystocia by 68% (Boulvain et al, 2016), no current national or international guidelines support such a clinical strategy in the absence of other risk factors, such as diabetes (ACOG, 2020).

A Cochrane systematic review in 2016, for which approximately 70% of participants were included came from the Boulvain et al (2015), randomised controlled trial evaluated the effect of induction of labour for suspected fetal macrosomia in non-diabetic women. Overall there was a significant decrease in the incidence of shoulder dystocia, actual fetal weight and newborn bony fracture with induction of labour however no difference in long term morbidity including brachial plexus injury, brain injury or death. They found that in order to prevent 1 fracture, 60 women would need to be induced. One of the trials reported on rates of third- and fourth-degree tears and found a significant increase in the induction of labour group. Overall, there were no significant difference in APGAR scores less than 7 at 5 minutes or low arterial cord blood pH with induction and there was no significant difference between groups in the risk of caesarean section (Boulvain, 2016).

The Royal College of Obstetricians and Gynaecologists (RCOG) does not currently recommend induction of labour for women with a suspected macrosomic fetus in the absence of diabetes (RCOG, 2012).

NICE Inducing labour guideline state there is uncertainty regarding the benefits and risks of induction of labour compared to expectant management, but:

- With induction of labour the risk of shoulder dystocia reduced compared with expectant management.
- With induction of labour the risk of third- or fourth-degree perineal tears is increased compared with expectant management.
- There is evidence that the risk of perinatal death, brachial plexus injuries in the baby, or the need for emergency caesarean birth is the same between the 2 options.
- They will also need to consider the impact of induction on their birth experience and on their baby.

Discuss the options for birth with the woman, taking into account their individual circumstances and her preferences, and respect their decision. Support recruitment into clinical trials, if available (NICE, 2021).

Caesarean birth

The (RCOG) guideline on the management of shoulder dystocia, Green-top Guideline No 42, was issued in 2012. They recommended that elective caesarean section should be considered for women with diabetes or gestational diabetes where EFW >4.5 kg in an attempt to reduce morbidity. It has been estimated that 443 diabetic women with babies >4.5 kg would need to have caesarean in order to prevent **one** permanent brachial plexus injury. In non-diabetic pregnant women with a EFW >5 kg, the number needed to treat rises to 3695 hence this **not** been a recommendation.

They also recommend offering a caesarean delivery for fetuses with an estimated weight of ≥5 kg or more in non-diabetic mothers and more than 4.5 kg in diabetic mothers, as in these infants, the incidence of emergency caesarean birth, brachial plexus injuries, and stillbirth is high (RCOG, 2012).

Shoulder dystocia
Shoulder dystocia occurs when an infant's head has been delivered vaginally, and the shoulder becomes stuck behind a woman's pubic bone. This can lead to maternal and fetal complications (Ewington et al, 2022).

NICE induction of labour guideline (2021) acknowledges that whilst the overall benefits and risks of induction of labour compared to expectant management are unknown.

The risk of shoulder dystocia is reduced with induction. Approximately 270 per 10,000 more cases of shoulder dystocia occurring in the expectant group compared to the induction group (in a non-diabetic population).
This should be balanced with the increased risk of third- and fourth-degree tears with expectant management. With 260 per 10,000 women who were induced expected to sustain a third- or fourth-degree tear compared to 69 per 10,000 women who have expectant management. (See table)

Outcome	Induction of labour	Expectant management	Risk difference
Shoulder dystocia	410 per 10,000 babies	680 per 10,000 babies	270 per 10,000 babies
Third- or fourth-degree tears	260 per 10,000 women	69 per 10,000 women	191 per 10,000 women

Adapted from NICE guideline (NG207) 2021

NICE advise that the woman should be given all the relevant information to assist them to make an informed choice regarding birth options related to their individual circumstances. NICE also advise there is no difference in the risk of injury to brachial plexus, need for emergency caesarean section and perinatal death between induction of labour and expectant management. NICE acknowledges the variation in clinical practice and strengths of evidence therefore place high importance on providing all information to women and their partners on birth options as well as giving information on relevant clinical trials (NICE, 2021).

Intrapartum care
According to the All-Wales place of birth assessment criteria (Appendix 2) an EFW via USS >97th centile with normal GDM screen and otherwise uncomplicated pregnancy requires Pathway B, an individual assessment and Intrapartum care-planning should be completed.

https://wisdom.nhs.wales/all-wales-guidelines/all-wales-guidelines1/all-wales-place-of-birth-assessment-criteria-appendix-2-posterpdf/
After an individual discussion and assessment, the woman may be suitable to give birth in a midwife-led setting. These discussions should be completed around 36/40 and can be revisited and re-evaluated throughout the pregnancy when required. Ensure that the antenatal counselling proforma has been completed and updated when attending place of birth setting and woman is happy with their plan of care for their birth and understands the difference in place of birth modelling, including the access to obstetric and neonatal services and facilities. Place the completed proforma in the handheld maternity record for reference.

- Following the above guidance an LGA fetus is **not** at higher risk of hypoxia during labour and therefore fetal surveillance during labour can be undertaken via Intermittent Intelligent Auscultation (IIA). If there are any concerns during labour, then recommend fetal surveillance by External Cardiotocograph (eCTG) as per SBHUB fetal surveillance Policy.
- Water immersion during labour and water birth are **not** contraindicated when there is suspected LGA fetus. However, explain to the woman that if there are any concerns that they may be asked to exit the birth pool. The POOL study (2024) found that birth in water, in the context of UK midwifery practice, is not associated with increased risks for mothers or their babies in cohorts without medical or obstetric complexity. Women considering or using water immersion during an uncomplicated labour should be informed that remaining in the water to give birth is not associated with increased risk to themselves or their baby, and they should be supported to make evidence-based individualised decisions on their care (Sanders, et al, 2024).
- Any delay in the 1st stage of labour will require a senior obstetric review. This needs to include a full assessment of intrapartum events prior to considering commencing oxytocin augmentation.
- Early decision for a caesarean birth should be made if there is no descent of the presenting part during the second stage of labour.
- According to the RCOG (2020), Green top guideline 26, on assisted vaginal birth, it should be performed by, or in the presence of, an operator who has the knowledge, skills and experience necessary to assess the woman, complete the procedure and manage any complications that arise.
  Where there is a non-rotational low-pelvic and lift out assisted vaginal births have a low probability of failure and most procedures can be conducted safely in a birth room.

  Where assisted vaginal births have a higher risk of failure they should be undertaken in theatre with immediate resource for caesarean birth. Higher rates of failure are associated with:

  1. Maternal BMI greater than 30
  2. Short maternal stature
  3. Estimated fetal weight of greater than 4 kg or a clinically well grown baby
  4. Head circumference above the 95th percentile
  5. Occipito–posterior position
  6. Mid-pelvic birth or when one-fifth of the head is palpable per abdomen

- Having a suspected an LGA baby should not alter the management of the second stage of labour following the birth of the fetal head. (Such as waiting for restitution, waiting for the next uterine contraction and attempting routine axial traction **before** diagnosing/declaring shoulder dystocia).
- Should a shoulder dystocia be diagnosed follow the PROMPT algorithm , document and complete a DATIX. (See SBUHB shoulder dystocia policy).

Auditable Standards

1. EFW >97th identified on scan
2. Birth weight centile (Scan accuracy within 21 days).
3. Appropriate counselling and birth planning (was the Proforma used/BRAIN used)
4. Mode of birth
5. Any shoulder dystocia
6. Perinatal outcomes
7. Datix completed

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Appendix 1: Screening for diabetes pathway

SCREENING FOR GESTATIONAL DIABETES

Offer OGTT between 24-28 weeks

- BMI ≥ 30 KG/M2
- Previous macrosomic baby ≥ 4.5 KG OR above the 97TH centile
- 1ST line family history of diabetes
- Ethnicity
- Previous stillbirth
- Poly cystic ovarian syndrome
- If taking Olanzapine or Quetiapine

Previous history of gestational diabetes

Offer HbA1C and random blood glucose with dating bloods

Offer OGTT at 16 weeks and 26 weeks

BMI ≥ 50 KG/M^2

Offer OGTT at 16 weeks and 26 weeks

GDM SCREENING MAY BE FURTHER INDICATED

- Any glycosuria before 20 weeks – refer to ADAU for OGTT at the earliest opportunity
- Glycosuria 1+ on 2 occasions OR 2+ on 1 occasion
- Moderate or severe polyhydramnios
- EFW ≥ 97TH centile (GROW 2.0)

Below 34 weeks

OGTT can be repeated
(at least 2 week interval)

Gastric bypass surgery should not have an OGTT - refer to DSM

If 2 screening tests have been done and are reported as normal and risk factors persist, please refer to DSM for a period of home blood glucose monitoring

Over 34 weeks

Offer HbA1C and Fasting Blood Glucose

Diagnosis criteria for GDM

Fasting blood glucose ≥ 5.6 MMOL/L

2 Hour post ≥ 7.8 MMOL/

HbA1C ≥ 39 MMOL/L

REFER TO DSM VIA EMAIL

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Appendix 2: All Wales place of birth assessment criteria

All Wales Place of Birth Assessment Criteria

Place of birth assessment at around 36/40, to be completed by the lead carer giver, and at each antenatal contact after this time including at each labour assessment.

Pathway A Additional care needs requiring Obstetric led intrapartum care (OLC)	Pathway B Individual assessment and intrapartum care planning	Pathway C Midwifery led intrapartum care (MLC)
Cardiovascular/other medical conditions • Confirmed cardiac disease • Hypertension • Malignant Disease	Cardiovascular/other medical conditions • Cardiac disease without intrapartum implications	Cardiovascular/other medical conditions
Haematological • Autoimmune disorders e.g. Systemic Lupus • Antiphospholipid syndrome • Haematological – History of sickle-cell, beta thalassemia Major • History of thromboembolic disorders • Hb less than 85g/L • Immune thrombocytopenia purpura or platelet count below 100 µ/L • Von Willebrand's disease • Bleeding disorder in the woman/fetus • Atypical antibodies known to cause HDN • Jehovah's witness with additional care needs • Women scoring 3 or 4 on VE assessment and on prophylactic or therapeutic antenatal anticoagulants	Haematological • Atypical antibodies not known to cause HDN • Platelets >100 <150 µ/L • Hb between 85-105g/L and asymptomatic of anaemia	Haematological • Hb of <110g/L at booking and <105g/L after 28 weeks, require iron therapy and recheck Hb at 34/40 OR 4 weeks after commencing iron therapy • Women scoring 2 on VTE assessment where postnatal thrombo-prophylaxis has been prescribed or declined
Endocrine • Hyperthyroidism (any history of hyper, may present as hypo) • Women on oral steroids • Type 1 and type 2 diabetes • Gestational diabetes	Endocrine	Endocrine • Adequately treated primary hypothyroidism
Auto-immune • Systemic lupus erythematosus, Scleroderma • Connective tissue disorders	Auto-immune • Connective tissue disorders (non-specific)	Auto-immune
Infective • Hepatitis B or C carriers of, or infected • HIV • Toxoplasmosis in pregnancy • Active infection or chicken pox/rubella • Primary infection of genital herpes (First lesion) diagnosed in pregnancy or recurrent active lesions after 36/40. • Tuberculous under treatment	Infective • Covid 19-symptoms or positive test within 10 days of onset of labour or previous hospital admission due to Covid-19 during pregnancy. • Previous baby affected by GBS, diagnosed with GBS this pregnancy, or opting for Intrapartum Antibiotic Prophylaxis (IAP).	Infective • History of genital herpes, and lesion free throughout pregnancy, offer prophylactic acyclovir from 36/40. • Reoccurrence of genital herpes in this pregnancy but lesion free prior to 36/40, offer prophylactic acyclovir from36/40. • Group B streptococcus in current pregnancy, declining Intrapartum Antibiotic prophylaxis (recommend neonatal observation as per EOS calculator). • GBS in last pregnancy; Offer Vaginal/rectal swab 35-37/40. If negative IAP not required, can be MLC for birth unless mother wishes . IAP in which case this should be supported.
Neurological • Epilepsy • Myasthenia gravis • Multiple sclerosis • Previous cerebrovascular accident	Neurological • Previous epilepsy not medicated and no seizures for 3 years.	Neurological
Gastro-intestinal/Renal • Liver disease (not obstetric-cholestasis) • Abnormal renal functions/known renal disease	Gastro-intestinal/Renal • Crohn's disease or ulcerative colitis	Gastro-intestinal/Renal
Previous pregnancies • Previous Molar pregnancy • Previous HELLP syndrome • Severe pre- eclampsia/eclampsia • Pre-eclampsia requiring preterm birth • Baby with neonatal encephalopathy • Uterine rupture • Placental abruption • Previous PPH 500-999mls requiring treatment or blood transfusion. • Primary PPH >1000mls or any amount causing symptoms of hypovolaemia. • Retained placenta • Caesarean section • Shoulder dystocia • Cervical tears • 3rd/4th degree tears with ongoing concern or continence issues	Previous pregnancies • Pre-eclampsia at term and asymptomatic this pregnancy. • 3rd/4th degree tears with no ongoing issues.	Previous pregnancies • 3 or more consecutive miscarriage • Mid trimester miscarriage (12-22 weeks). • Previous SGA below 10th centile (Suitable for Midwifery-led birth where USS's are Normal) • Previous pre-term birth now >37/40. • Previous PPH 500-999mls with no treatment or evidence of bleeding due to uterine atony, previous birth record to be reviewed to confirm clinical picture.
Current pregnancy • Multiple pregnancy • Low PAPP-A and concerns around fetal growth. • Gestational diabetes • Placenta praevia • Pre-eclampsia /pregnancy induced hypertension • Pre-term pre-labour rupture of membranes • APH of placental origin or > 1 episode after 24 weeks • Alcohol dependency • Maternal age ≥40 at booking. • Nulliparous BMI ≥35-39.9 with normal GDM screen and USS's. • All parity BMI>40 • Grand multiparity P6 >. • Concerns with fetal growth or placental function. • Concerns around fetal movement within 24 hours of the onset of labour. • EFW ≥97th with any other additional care needs • Polyhydramnios/oligohydramnios • Gestation >41+6 • Therapeutic or prophylactic thromboprophylaxis • Wt. <50kg with anaemia • Persistent breech/mal presentation.	Current pregnancy • Women declining booking/anomaly USS • APH of unknown origin,1 episode after 24/40 • Substance misuse • Para 5 • EFW via USS > 97th centile with normal GDM screen and otherwise uncomplicated pregnancy. • 2 episodes of raised blood pressure antenatally, taken more than 4 hours apart. • Recurrent. episodes of AFM (2 or more within 21 days) with reassuring outcomes of investigations and where fetal movements have been normal in the last 24 hours. • Booking WT<50kg , no concerns around fetal growth and normal haemoglobin. • Low PAPP-A with normal fetal growth on serial USS	Current pregnancy • BMI at booking of 30 to 34.9kg/m • Multiparous BMI 35-39.9 with previous vaginal birth who are otherwise suitable for Midwifery-led birth with normal GDM screen and normal routine USS's. • Maternal age 35-39 inclusive at booking. • Smoker (Suitable for Midwifery-led birth where USS's are normal). • P4 or < • EFW >90th <97th centile on USS at 36/40 with otherwise uncomplicated pregnancy. • Assisted conception • A single episode or >1 episode of AFM (occurring > 21 days apart), with reassuring investigation and normal fetal movement in the last 24 hours.
Previous gynaecological history • Myomectomy • Hysterectomy • Cone biopsy • Any uterine perforation resulting from previous STOP or surgery.	Previous gynaecological history • Extensive vaginal repair/re fashioning • LLETZ x2 laparoscopy/laparotomy	Previous gynaecological history • LLETZ x 1
Respiratory • Severe asthma requiring increase in treatment of hospital admission during pregnancy • Cystic fibrosis	Respiratory	Respiratory • Mild asthma women only using inhalers prescribed by GP. Steroid inhalers where asthma has been stable during pregnancy
Mental Health • Where intensive maternal or neonatal monitoring is required during labour and/or postnatally.	Mental Health • Stable mental health illness on various psychotropic medication, including antipsychotics. (Plan neonatal care as per maternal psychotropic drug pathway)	Mental Health • Women on SSRIs and stable (Plan neonatal care as per All Wales maternal psychotropic drug pathway).
Advise to give birth in an obstetric unit. Any women who are planning birth outside of the OU will be planning birth 'outside of guidance' and will require detailed care plans as per local pathways.	After an individual discussion and assessment may be suitable to give birth in a midwifery-led setting.	Advise to give birth in a midwifery led setting.

At every antenatal assessment, by midwives and the medical team, review of the antenatal care pathway should occur and the lead professional and place of birth recommendation changed where required.
1 =Definition of recurrent altered fetal movement =is where at least 2 episodes of altered fetal movements are reported within a 21-day period.
*It is noted that the above is not exhaustive and clinicians should exercise clinical judgment.
*Midwives should be aware of the impact of multiple complexity, even where these are in care pathway B, multiple factors in any pathways may move the care need to pathway A.

Checklist for Clinical Guidelines being submitted for Approval Title of Guideline

Title of Guideline:	Suspected Large for Gestational Age (LGA) Fetus (in a non-diabetic pregnancy)
Name(s) of Author:	Jayne Bowden
Chair of Group or Committee approving submission:	Antenatal Forum
Brief outline giving reasons for document being submitted for ratification:	There is no current guidance on what plan of care a woman receives if she has a fetus that is identified as LGA and there is discrepancies in advice and what care is given.
Details of persons included in consultation process:	Victoria Owens, Tania Peverley, Nicola John & Dr Louis-Emma Shaw
Name of Pharmacist (mandatory if drugs involved):	N/A
Issue / Version No:	1
Please list any policies/guidelines this document will supercede:	None
Date approved by Group:	Antenatal Forum
Next Review / Guideline Expiry:	16/10/2028
Please indicate key words you wish to be linked to document:	Large gestational Age, LGA, Ultrasound, EFW >97th Centile, Macrosomia, Accelerated fundal height, Big baby, fetal overgrowth, GDM
File Name: Used to locate where file is stores on hard drive	