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1. INTRODUCTION & SCOPE

This UHL fetal monitoring guideline uses FIGO classification for the assessment of fetal wellbeing. Previous guidance has been mainly based solely on pattern recognition. We aim to encompass a pathophysiological approach to explain how a fetus defends itself against intrapartum hypoxic ischaemic insults and highlight the signs that suggest progressive loss of compensation.

The purpose of intrapartum surveillance, in general, is a timely detection of babies who may be hypoxic, so that additional assessments of fetal wellbeing may be used or the baby can be delivered by caesarean or instrumental vaginal birth, to prevent perinatal/neonatal morbidity or mortality (NICE 2017, FIGO 2015).

As a result of a greater understanding and incorporation of physiology teaching we expect to see a reduction in unnecessary intervention as well as a reduction in fetal hypoxic neurological injury, stillbirth and early neonatal death.

This guideline applies to all healthcare professionals providing care for pregnant women in labour.

WHAT'S NEW IN THIS GUIDELINE?

- Clarified 2 or more episodes of reduced fetal movements in a 21 day period in the 3 weeks before labour now defined as an indicator for advising CEFM
- Clarified that reduced fetal movements in the 24 hours prior to the onset of regular contractions as an indicator for advising CEFM
- HIE removed from title of risk assessment
- Maternal pyrexia parameters that indicate advising CEFM brought in line with NICE
- Is the birthing person concerned? Added to assessment score

RELATED DOCUMENTS:

- Intrapartum Care UHL Obstetric Guideline
- Intermittent Auscultation in Labour UHL Obstetric Guideline

2. CONTINUOUS ELECTRONIC FETAL MONITORING (CEFM)

Prior to commencing CEFM the fetal heart (FH) should be auscultated with a Pinard Stethoscope.

CEFM could potentially reduce mobility. However, every effort should be made to facilitate the normal physiology of labour by encouraging the woman/birthing person to adopt upright positions and mobilise. This can be facilitated by the use of wireless telemetry or by the encouragement to move within the constraints of being connected to the monitor.

CEFM is a screening tool for hypoxia and does not replace the need for accurate clinical observations on which decisions should be made in conjunction with the CTG (FIGO 2017).

2.1 INITIAL REASON FOR CEFM

MATERNAL	FETAL
Gestation ≤37 or ≥42 weeks	Abnormal Doppler
Induced Labour	Known or suspected FGR / Macrosomia
Administration of Oxytocin	Oligohydramnios / Polyhydramnios
Ante/Intrapartum Haemorrhage	Malpresentation / Breech / free floating head in a primiparous women
Maternal Illness (e.g. diabetes, cardiac, renal, hyperthyroidism); monitoring as per Consultant plan	Meconium Stained Liquor
Pre-eclampsia / Hypertension	Multiple pregnancy (all babies to be monitored)
Previous Uterine Scar (Caesarean Section / Myomectomy)	2 or more episodes of reduced fetal movements in a 21 day period in the 3 weeks before labour.
Contractions ≥5:10 or lasting > 90 seconds	Reduced fetal movements in the 24 hours prior to the onset of regular contractions.
Epidural: A CTG should be commenced prior to an epidural CEFM (if not already in use for maternal or fetal risk factors)	If Identified on IIA (Intelligent Intermittent Auscultation) Recurrent accelerations (immediately following a contraction i.e. overshoot) Rise in Baseline Repeated decelerations / slow to recover decelerations
Prolonged Rupture of Membranes ≥ 24 hours pre-labour unless delivery is imminent.	Fetal structural abnormalities diagnosed during the antenatal period and planned for CEFM
Signs of chorioamnionitis or sepsis • Maternal Pyrexia / Tachycardia >120bpm • Offensive Liquor • Abdominal pain that differs from pain associated with contraction	
Maternal request	

The table above is not exhaustive; any condition which is thought to increase the risk of fetal hypoxia mandates CEFM.

2.2 SPECIAL CIRCUMSTANCES

Other factors that are present during labour such as prolonged rupture of membranes, (defined as spontaneous rupture of membranes for greater than 24 hours), chorioamnionitis, anhydramnious, meconium-stained liquor, maternal infection or pyrexia, and the speed of evolution of hypoxia are likely to modify the responses of the fetus as well as affect the perinatal outcome. See Appendix 4 for details of the physiological mechanisms.

MONITORING OF TWINS

- CEFM should preferably be performed with dual channel monitors.
- Clearly identify which trace is allocated to which twin on the CTG and in the notes.
- Consider offsetting twin 2 by 20 beats in order to clearly identify each twin separately.
- External monitoring of both twins is acceptable for as long as distinct traces of good quality are obtained.
- There should be a low threshold for internal monitoring of the presenting twin in the absence of contraindications as it is often superior in quality especially in the second stage.

3. ASSESSMENT AND MANAGEMENT OF WOMAN IN LABOUR

3.1 INITIAL ASSESSMENT

All women/birthing people that have existing medical or obstetric conditions should have an obstetric review during pregnancy with a full plan of care formulated for labour and birth. This should include the suitability for different birth settings and the type of fetal monitoring required when in labour. The care plan should be explained to and agreed by the woman/birthing person and filed in their medical records. The midwife must classify whether the woman/birthing person is low or high risk and document this within the maternal records.

3.2 INITIAL ASSESSMENT AT ONSET OF LABOUR

1) Assess for Antenatal and Intrapartum Risk Factors. (Appendix 1)

2) Use the fetal wellbeing for labour sticker as a useful checklist that helps exclude signs of chronic hypoxia for all admissions in established labour (appendix 2) and place in medical records.

3) Complete the start of CTG sticker (appendix 3)

4. CTG CLASSIFICATION PROCESS

4.1 ONGOING AND HOURLY ASSESSMENT STANDARDS

- Document CTG using Intrapartum Fetal heart rate sticker, for every assessment; (appendix 4) If this sticker is not available then the pneumonic DRCBRAVADO should be used. All aspects of the sticker should be completed

- Use the FIGO classification table 1 and Management plan table 2 to classify your CTG and escalate if required, using the physiological teaching to aid management plan.

  The fetal heart should be assessed hourly by the midwife caring for the woman/birthing person.

CTG INTERPRETATION AND RESPONSE – INTRAPARTUM MONITORING OF HIGH RISK CASES (FIGO 2015)

		By definition, all CTG's with these features require further evaluation. The total clinical picture must always be considered when interpreting CTG's – see *AH MOTHERS acronym	
	Normal	**Suspicious**	**Pathological**
Baseline (bpm)	110 – 160	Lacking at least one feature of normality but with **no** pathological features	Above 180bpm or below 100bpm
Baseline variability (bpm)	5-25		Less than 5 (reduced) >50 minutes More than 25 (saltatory) >30 minutes **Or** sinusoidal for >30 minutes
Decelerations	No repetitive Decelerations Repetitive decelerations are those occurring with more than 50% of contractions		Repetitive, late or prolonged decelerations with any concerning characteristics >30 minutes or >20 minutes if there is reduced variability also: • Reduced variability within the deceleration • Gradual or failure to return to baseline after contraction • Biphasic (W) shape • No shouldering **Or** A single prolonged deceleration (below 100 bpm) lasting 3 minutes or more
Interpretation	Fetus with no Hypoxia/acidosis	Fetus with low probability of having hypoxia/acidosis	Fetus with high probability of having hypoxia/acidosis
Management	No intervention necessary to improve fetal Oxygenation state	Action to correct reversible causes Close monitoring or additional methods to evaluate fetal oxygenation	Immediate action to correct reversible causes Consider additional methods to evaluate fetal oxygenation If not possible to expedite delivery
Accelerations	The presence of fetal heart rate accelerations, even with reduced baseline variability, is generally a sign the baby is healthy. The loss of accelerations alone (in labour) is unlikely to be associated with fetal acidosis.		

AH MOTHERS acronym – APH, Hypertension, Meconium, Oxytocin, Temperature/Tachysystole, Heart Rate abnormal pattern, Epidural analgesia, Rate of progress in labour, Scar

MANAGEMENT PLAN (TABLE 2)

This is not an exhaustive list or in any order

Normal Classification	Continue CTG – hourly reviews, hourly fresh eyes and intrapartum risk assessment score or if CEFM no longer advised discontinue and continue IIA
Suspicious Classification	• Full set of maternal observations • Consider risk factors • Initiate conservative measures** and document time and type of measure • Consider stopping or reducing oxytocin • Escalate to co-ordinator/obstetric team and document time on CTG sticker • Correct hypotension • Communicate with woman/birthing person regards to plan • Review in 30 mins or before • If Hyperstimulation-stop oxytocin or remove the propess. Consider tocolysis
Pathological classification	• Full set of maternal observations • Consider risk factors • Initiate conservative measures** and document time and type of measure • Escalate immediately to co-ordinator and Obstetric team • Consider FSE • Consider FBS • Correct hypotension • If pushing-stop to see if improvement made • VE- offer digital stimulation • Stop oxytocin or remove Propess. Consider tocolysis • Ensure communication with the woman/birthing person • Consider expediting delivery if indicated
Acute	• Pull emergency buzzer • Exclude accidents~ • Correct reversible causes • VE- to exclude cord prolapse • Initiate conservative measures** • Prepare for birth • Communicate plan with the woman/birthing person • Expedite delivery
** conservative measures Change maternal position, reduce or stop oxytocin, remove Propess, consider tocolysis if hyperstimulation, paracetamol if sepsis suspected, oral fluids/IV if maternal dehydration or tachycardia	~ accidents- cord prolapse, uterine rupture, abruption, ruptured vasa Previa Tachysystole- remain on CTG- Observe, inform co-ordinator and obstetric team for plan of care

4.2 FRESH EYES

In addition to the continuous assessment of the CTG undertaken by the midwife caring for the woman/birthing person, at least once every hour the midwife must seek the assistance of a colleague (buddy) to perform a systematic, independent assessment of the CTG trace. The reviewer should document their findings and categorisation of the CTG in the maternal notes using the sticker in appendix 4 (Hyperlink)

Fresh Eyes is a separate independent review of the overall clinical picture, which includes CTG and fetal heart rate assessment undertaken by an additional member of staff other than the staff member directly caring for the woman/birthing person. The assessment should be completed by either a midwife who is Band 5 or above, or an obstetrician who is ST3 or above. Two Band 5 midwives who are both within the first 12 months of qualifying should not routinely provide fresh eyes assessment. If unavoidable circumstances dictate that the only available fresh eyes pairing are 2 band 5 midwives within the first 12 months from qualifying, the delivery suite co-ordinator must be informed and should ensure that no more than two consecutive reviews of this kind occur.

All staff undertaking fresh eyes must have completed and passed all mandatory CTG training/assessment.

In second stage there should be a review every 30 mins or before by a senior midwife/Obstetrician and plan written in the notes once active pushing has commenced

Where agreement cannot be made see appendix 5 for escalation tools

4.3 DISCONTINUATION

Clearly document why the CTG has been discontinued on the CTG itself and sign it.

5. DOCUMENTATION, QUALITY AND STORAGE

DOCUMENTATION STANDARDS

It is the responsibility of every clinician using the CTG machine to perform the following initial checks prior to commencing the trace:

- Correct date and time
- Correct speed – 1cm per minute
- Paper specific for the machine in use, with correct orientation

Every trace should start by clearly documenting:

- The name, DOB, and hospital number of the woman/birthing person using start of CTG sticker (appendix 1)
- Indication for CEFM
- Maternal observations

On-going documentation of maternal heart rate every hour in the first stage of labour and every 15 minutes in the second stage of labour on the partogram

Simultaneous maternal heart rate monitoring should be considered in:

- Fetal heart block
- Fetal heart rate similar to maternal heart rate
- Maternal tachycardia
- During 2nd stage of labour trace shows accelerations coinciding with contractions/expulsive efforts

Maternal observations:

- Maternal BP and temperature is to be measured every 4 hours unless more frequent observations are indicated clinically
- Mat pulse should be documented every 15 mins in second stage

Relevant intrapartum events should be documented on the CTG for example:

- Vaginal examination
- Siting of an epidural
- Review of CTG
- Maternal hypotensive episodes

Hourly assessment should be performed using the Intrapartum fetal heart sticker and documented in the maternal notes.

Ongoing assessment

- Every hour a Fresh eyes review should be performed using the **intrapartum fetal heart sticker and the intrapartum risk assessment tool should be updated**

6. FETAL BLOOD SAMPLING

FBS can be considered in the presence of a pathological FHR trace, after correcting reversible causes, unless either FBS is not possible or there is clear evidence of acute compromise or there are contraindications (i.e. BBI and bleeding disorders); in which cases, delivery should be expedited.

If offering FBS, the woman/birthing person should be given a full explanation of the procedure and the benefits and risks.

Fetal blood samples should be taken with the woman/birthing person in the left-lateral position.

The classification of fetal blood sample (FBS) results:

FBS Result (pH)	Lactate (mmol/l)	Interpretation
≥ 7.25	≤ 4.1	Normal
7.21 – 7.24	4.2 – 4.8	Borderline
≤ 7.20	≥ 4.9	Abnormal

The normal range for Base Excess is -2 to +2.

These results should be interpreted taking into account any previous pH measurement, the rate of progress in labour and the clinical risk features of the woman/birthing person and baby.

After a normal FBS result (pH ≥7.25), sampling should be repeated no more than 60 minutes later if this is still indicated by the CTG or sooner if additional non-reassuring or abnormal features are seen.

After a borderline FBS result (pH 7.21-7.24), repeat sampling should be offered no more than 30 minutes later if this is till indicated by the CTG or sooner if additional non-reassuring or abnormal features are seen.

After an abnormal FBS result (pH ≤7.21) - expedite delivery.

If unable to obtain a sufficient sample Consultant Obstetric opinion/review should be sought immediately.

The time taken to take an FBS needs to be considered when planning repeat samples.

If the CTG trace remains unchanged and the FBS result is stable after the second test, a third/further sample may be deferred unless additional non-reassuring or abnormal features are seen.

Where a third FBS is considered necessary, Consultant Obstetric opinion should be sought.

6.1CONTRAINDICATIONS TO FBS INCLUDE:

- Maternal infection (for example, HIV, hepatitis viruses, herpes simplex virus) and chorioamnionitis
- Fetal bleeding disorders (for example, haemophilia)

FBS results should be documented in the maternal health record and the printout secured in an envelope in the maternal hospital notes in the current pregnancy section. If a printout is unavailable (equipment failure etc.), document the reason in the notes.

7. RISK MANAGEMENT

Paired cord bloods (from umbilical artery and vein) should be collected and analysed from any baby born with:

- Apgar Score 3 or less at one minute or
- 6 or less at five minutes, and results recorded in maternal records.
- Vaginal breech birth
- Complications in birth e.g. shoulder dystocia
- Instrumental delivery
- Meconium regardless of whether the baby needs resuscitation or not

Midwives and obstetricians should complete a Datix in relation to the following incidents:

- Apgar Score of 6 or less at 5 minutes
- Unexpected admission to NNU
- Arterial cord pH <7.05
- Stillbirth

Please check the criteria on the histopathology placenta examination request form before disposing of the placenta.

STORAGE

CTG must be stored for 25 years.

8. MANAGEMENT OF SUSPECTED FETAL HYPOXIA

Identify reversible causes as alleviating them can lead to subsequent recovery of adequate fetal oxygenation and the return to fetal wellbeing and a normal trace.

When CTG changes develop, it is important to address underlying causes before hypoxia occurs. The midwife caring for the woman/birthing person should escalate to a senior midwife/obstetric team for review without delay whilst simultaneously starting conservative measures.

9. CONTRACTIONS AND EXCESSIVE UTERINE ACTIVITY

Contractions are recorded as bell-shaped, gradual increases in the uterine activity signal, followed by roughly symmetrical decreases. When using the tocograph transducer, only the frequency of contractions can be reliably evaluated (FIGO 2015). The intensity and duration of contractions may be assessed by

manual palpation. Frequency of contractions cannot be assessed reliably by the tocograph transducer and manual palpation is also required.

9.1 EXCESSIVE UTERINE ACTIVITY:

Excessive uterine activity can be detected by palpating the uterine fundus, assessing the frequency, strength and duration of contractions and the tone in between.

It can usually be reversed by

- Reducing or stopping oxytocin infusion
- Removing administered prostaglandins
- Starting acute tocolysis with beta-adrenergic agonists (terbutaline) or nitro-glycerine
- During the second stage of labour, maternal pushing efforts utilising valsalva manoeuvre can also contribute to fetal hypoxia/acidosis and the mother can be asked to stop pushing and a further assessment made to see if the situation improves (FIGO 2015). If this does not improve the trace, delivery should be expedited.

Important note: Due to the longer half-life of prostaglandins, hyperstimulation usually requires the removal of the pessary and administration of tocolytics at the same time, especially when dealing with acute hypoxia.

TACHYSYSTOLE:

Tachysystole presents an excessive frequency of contractions and is defined as the occurrence of five or more in 10 minutes, in two successive 10-minute periods or averaged over a 30-minute period but with a normal fetal heart rate.

HYPERSTIMULATION:

Hyperstimulation refers to an increase in frequency of the contractions, strength of uterine contraction, increased uterine tone between contractions and/or prolonged contractions for over 2 minutes. It is associated with CTG changes/ abnormalities. Hyperstimulation can occur in spontaneous labour without the use of uterine stimulants, but more commonly occurs with uterine stimulants. (To avoid over complication, the term hyperstimulation will be used to include both iatrogenic and spontaneous increased uterine activity).

Management of Hyperstimulation:

Reduce/stop oxytocin infusion or remove Propess if used. If this not effective then tocolysis with Terbutaline is used to treat hyperstimulation (unless contra-indicated):

Regimen = Terbutaline 0.25mg Subcutaneous Injection

This can be repeated every 15 minutes to achieve adequate tocolysis; discuss with CONSULTANT OBSTETRICIAN after administration of 2nd dose. {Maximum dose: 5mg in 24 hours}.

10. OTHER CAUSES OF FETAL HYPOXIA

AORTO-CAVAL COMPRESSION:

Aorto-caval compression can occur in supine position. Turning the mother to lateral or upright positions may relieve compression.

TRANSIENT CORD COMPRESSION:

Transient cord compression (variable decelerations) can sometimes be relieved by changing maternal position.

SUDDEN MATERNAL HYPOTENSION:

Sudden maternal hypotension most frequently occurs after spinal or epidural administration. This is reversible by rapid fluid administration + I.V. ephedrine bolus (by the anaesthetic team).

ACTIONS WITH NO SUPPORTING EVIDENCE:

Oxygen administration to a well oxygenated woman/birthing person does not alleviate fetal hypoxia and may actually be more harmful.

I.V. fluids in normotensive well hydrated women/birthing people - although some may consider IV fluids to improve the placental flow, administration of IV fluids in chronic hypoxia and chorioamnionitis may provide a false sense of reassurance without improving perinatal outcomes.

Good clinical judgment is required to diagnose the underlying cause of the changes on the CTG, to judge the reversibility of the conditions with which it is associated, and to determine the timing of delivery. The objective is to avoid prolonged fetal hypoxia/acidosis, as well as unnecessary obstetric interventions. Additional methods such as fetal scalp stimulation may be used to evaluate fetal oxygenation.

11. ADJUNCTIVE TECHNIQUES TO ASSESS FETAL WELLBEING

FETAL SCALP ELECTRODE (FSE) AND QUALITY

External FHR monitoring is the recommended initial method, provided that a recording of acceptable quality is obtained i.e. that the basic CTG features can be identified. If the trace is of poor quality, early recourse to FSE is advised if no contraindications exist. Such instances include increased maternal BMI and poor recording during second stage (thus avoiding monitoring maternal heart rate).

Contraindications to FSE include:

- Maternal infection (for example, HIV, hepatitis viruses, herpes simplex virus) and chorioamnionitis
- Fetal bleeding disorders (for example, haemophilia)
- Prematurity (less than 34 weeks)

12. EDUCATION AND TRAINING

The Maternity Clinical Network within the East Midlands has produced a training record and competency document that needs to be completed by all clinicians who deliver care in labour, (Saving Babies Lives, 2015). The document is recognised across the region and should be retained by the clinician, included in their revalidation and annual appraisal process as a record of their CPD and suitability for providing care to women in labour. It is suitable for all Midwives, all doctors working in Obstetrics, including GP trainee's,

FY1 & FY2. Midwives and Obstetricians who lead on Education, guidance review and the investigation of incidents/lessons learnt or the management of other clinicians involved in EFM, must also complete this competency pack regardless of their clinical contribution.

The following must be achieved annually and will be recorded and reported on via HELM.

- Record of education in Physiological CTG Interpretation (can include face to face teaching, e-learning, internal and external courses)
- Record of annual theory assessment where the pass mark is 85%. If pass mark not reached, fetal monitoring midwife/education team to follow fail safe pathway.

The following are recommendations only but can be used to enhance knowledge and use for CPD using regional learning package

- Record of participation in EFM review events (CTG meetings / feedback of lessons learnt/incident review. 2 per year
- Peer review of EFM interpretation - 2 required within this 12-month period for professionals that provide intrapartum care.
- Handbook for reference for further details to physiology of the Fetal heart

Once the whole competency package has been completed this will be recorded by the Women and Childrens Education Team on a locally held database.

13. MONITORING COMPLIANCE

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Auditable standards against the current guideline	Audit	Labour Ward Leads and Matrons	Yearly	Report to Maternity Governance

14. SUPPORTING REFERENCES

1. Ayres-de-Campos D, Spong CY, Chandraharan E, 'FIGO consensus guidelines on intrapartum fetal monitoring: Cardiotocography', FIGO (2015).
2. Chandraharan E (Ed) Handbook of CTG Interpretation; From Patterns to Physiology Cambridge University Press 2017.
3. National Institute for Health and Care Excellence. Intrapartum care: care of healthy women and their babies during childbirth NICE clinical guideline 190 (2017).
4. Saving Babies Lives Version 3 2023
5. fetalmedicine.org/education/fetalabnormalities/amnioticfluid/polyhydramnios (accessed 14/09/2022)

15. KEY WORDS

Labour, Fetal Heart Rate, CTG, Intermittent Auscultation, Interpretation, Classification, Hypoxia

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT		
Author / Lead Officer:	Karen Moores, Consultant Obstetrician Chandrima Roy Consultant Obstetrician Sarah Blackwell Fetal Monitoring Lead Midwife	**Executive lead:** Chief Nurse
Reviewed by:	Sarah Blackwell	

REVIEW RECORD			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
August 2021	V1.1	Maternity Governance committee August 2021	Amended actions following abnormal FBS from seek senior obstetric advice to expedite delivery. If unable to obtain a sufficient sample Consultant Obstetric opinion/review should be sought immediately
June 2022	V1.2	Maternity Governance committee June 2022	Fresh eyes frequency changed to hourly and clarification of training/experience required to complete fresh eyes assessment added. HIE assessment updated in line with new obesity guidance for monitoring women with BMI <40 and polyhydramnios now assessed using DVP
February 2023	V1.3	P McParland	Updated histology placenta examination request criteria in line with current histopathology guidance – removed 'all placenta's should be sent to histology where babies have required unexpected admission to NNU' replaced with 'Please check the criteria on the histopathology placenta examination request form before disposing of the placenta'
May - July 2023 Approved September 2023	V2	S Blackwell	Clarified Reduced fetal movements in the 24 hours prior to the onset of regular contractions as a reason for offering CEFM in labour. Removed HIE from the IP risk assessment form Admission in labour criteria amended to Reduced fetal movements in the 24 hours prior to the onset of regular contractions OR recurrent episodes of reduced fetal movements (as defined as more than 1 episode in a 21-day period) from 26 wks Removed growth <20g per day after 32weeks Added birthing person concern

APPENDIX 1: INTRAPARTUM RISK ASSESSMENT

Addressograph

PRE-EXISTING RISK FACTORS

- ☐ Previous LSCS
- ☐ Previous Stillbirth
- ☐ Medical disease (e.g. Diabetes, hypertension, see intrapartum care guideline)
- ☐ Maternal age >40
- ☐ BMI >40
- ☐ Multiple Pregnancy
- ☐ Fetal anomaly
- ☐ IVF / ICSI – individualised plan
- ☐ Unbooked person or minimal antenatal care in any country

ANTENATAL SCORE ☐

ADMISSION IN LABOUR OR FOR IOL

- ☐ USS: Growth <10th centile
- ☐ GROW pathway and last scan >4weeks ago
- ☐ Reduced fetal movements in the 24 hours prior to the onset of regular contractions
- ☐ Recurrent episodes of reduced fetal movements (more than 1 episode in a 21 day period prior to labour)
- ☐ PET or Hypertension requiring medication
- ☐ IOL/Augmentation
- ☐ DVP ≥ 12cm
- ☐ Long Latent phase – 3 admissions in early labour
- ☐ Gestation: <37 weeks or >42weeks
- ☐ ≥24hr ruptured membranes pre-labour

ADMISSION SCORE ☐

Method of Fetal Monitoring (a score ≥ 1 please OFFER continuous monitoring and ensure you provide information leaflet if available)

CTG ☐ IIA ☐

DEVELOPING RISK FACTORS – review hourly in labour with fresh eyes/CARES peer review

DATE / TIME:							
2+ Proteinuria or more							
Raised BP (>140/90 between contractions)							
APH							
Meconium							
Hyperstimulation or tachysystole							
Raised Temp (x2 ≥37.5 for 1 hour or >38 for 30mins)							
Confirmed slow progress in 1st / 2nd stage of labour							
Oxytocin							
Epidural							
Maternal pulse >120bpm (x2 30mins apart)							
Other*							
TOTAL SCORE:							
Is the birthing person concerned?							
Sign / Print							

If a woman/birthing person has a score ≥ 1 please OFFER continuous monitoring and ensure that you have consent.*This is not an exhaustive list. Please seek advice from midwifery co-ordinator or obstetrician. For 3rd stage risk assessment please refer to the current PPH risk assessment documentation.

APPENDIX 2 – FETAL WELLBEING ASSESSMENT FOR LABOUR

This sticker should be used when a woman/birthing person is first admitted for induction of labour or spontaneous labour

Fetal Wellbeing Assessment For Labour			
1.	Baseline fetal heart rate appropriate for gestational age? Baseline rate ____ bpm	Yes	No
2.	Normal variability and cycling?	Yes	No
3.	Presence of accelerations (not in labour or latent phase of labour)	Yes	No
4.	Shallow or late decelerations?	Yes	No
5.	Consider the wider, clinical picture: meconium, temperature, fetal growth, reduced fetal movements etc.?	Yes	No
Overall impression: Normal/Chronic Hypoxia/other			
Management Plan: **Initial HIE score :**			

APPENDIX 3 – START OF CTG STICKER

CTG check list (attach to start of CTG trace)	University Hospitals of Leicester NHS	
Reason for CTG:		
Date:	Date set correctly on CTG? (tick)	
Time:	Time set correctly on CTG? (tick)	
Name:	Paper speed set to 1cm per min (tick)	
Hospital Number:	Gestation:	
(or attach addressograph)	Maternal Pulse:	
	FH auscultated prior to CTG (rate):	

APPENDIX 4 – INTRAPARTUM CTG HOURLY ASSESSMENT/FRESH EYES

This sticker should be used for subsequent intrapartum CTG assessments.

<table>
<tr><td>Intrapartum CTG Hourly Assessment
University Hospitals of Leicester NHS
NHS Trust</td><td colspan="3">Date:

Time:</td><td>FRESH EYES

Yes / No</td></tr>
<tr><td rowspan="3">Determine Risks for Fetal Hypoxia</td><td colspan="3">Rising Baseline Rate (≥10%?)
A rising baseline rate even within the normal range maybe of concern if there are any other concerning features present</td><td>Yes / No</td></tr>
<tr><td colspan="3">Accelerations
Evidence of Cycling?</td><td>Yes / No
Yes / No</td></tr>
<tr><td colspan="3">Variability ≥ 5-25 bpm?</td><td>Yes / No</td></tr>
<tr><td rowspan="3">Overall Assessment (please circle)

Normal - No Intervention required

Suspicious - Correct reversible causes

Pathological - Escalate & Correct reversible causes</td><td colspan="3">Repetitive Decelerations or with concerning features</td><td>Yes / No</td></tr>
<tr><td colspan="3">Contractions, is there an Interval ≥90secs?</td><td>Yes / No
:10</td></tr>
<tr><td>HIE Score</td><td></td><td>Mat Pulse</td><td></td></tr>
<tr><td>Management Plan</td><td colspan="4"></td></tr>
<tr><td colspan="2">Escalated: Yes / No
Who to:</td><td colspan="3">Sign: _____
Print name: _____</td></tr>
</table>

APPENDIX 5 – ESCALATION TOOLS