# Intermittent Auscultation (IA) of the Fetal Heart Guideline

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For the support of all midwives and obstetricians who provide intermittent auscultation (IA) the fetal heart of women in labour

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Elfh: E-learning for health
IA - Intermittent Auscultation
Fh - fetal heart
CEFM - Continuous electronic fetal monitoring
CLC – Consultant led care
FM – Fetal movements

# Contents

## Scope

For the support of all midwives and obstetricians who provide intermittent auscultation (IA) the fetal heart of women in labour

## Aim

The aim of this guideline is to give guidance to all midwives and obstetricians on the process of intrapartum IA of the FH in labour to timely identify babies with hypoxia/acidosis to enable appropriate action before the occurrence of injury .

## Objectives

The aim of this guideline will be met by the following objectives when staff have :

- Clear understanding of inclusion criteria for IA
- Understanding of method of IA
- Recognise when continuous electronic fetal monitoring is required/appropriate.

## Introduction

Intermittent auscultation (IA) of the fetal heart (FH) in active labour with a handheld doppler or Pinard stethoscope is recommended as the standard of care for all women who are healthy with uncomplicated pregnancies (RCM, 2018; FIGO, 2018; NICE, 2017; WHO,2018)

The aim of IA is the timely identification of babies with hypoxia/acidosis to enable appropriate action before the occurrence of injury.

In the absence of risk factors for fetal hypoxia or acidosis IA is the recommended method of fetal monitoring; regardless of birth setting (NICE 2022).

In order to seek to prevent variation this guideline follows national guidance and should be read in conjunction with the All Wales Clinical Pathway for Normal Labour (AWCPNL)

Effective IA enables the detection of potential fetal compensation; timely intervention can prevent decompensation and resulting perinatal & neonatal morbidity and mortality. IA is not reliable for assessing fetal wellbeing if the fetus is already compromised.

IA facilitates the normal physiology of labour by enabling freedom of movement..

There is currently no high quality evidence to recommend any particular frequency and duration of IA. IA in accordance with RCM & NICE guidelines is generally accepted as the gold standard within the UK, this is reflected within the AWCP

In the absence of any additional evidence base, the frequency of auscultation will follow guidance from NICE (2022), where the 'Oxford' counting methodology (ElfH exemplar, counting for at least 1 minute, in 15 second blocks) is used this should be clearly documented within intrapartum records

## Inclusion Criteria:

### Women Suitable for Midwifery Lead Care

- The AWCPNL must be used in all settings for all women suitable for midwifery led intrapartum care.
- The part 2 assessment in the AWCPNL should form part of the holistic assessment of suitability for place of birth and form of intrapartum fetal monitoring.
- Continuous electronic fetal monitoring (CEFM) in healthy women with uncomplicated pregnancies women is associated with an increased rate of caesarean sections and assisted vaginal birth without any improvement in outcome (Maude et al., 2014).
- Women must be fully informed of the risks and benefits of IA and CEFM.
- If she chooses not to be monitored by the recommended method a full discussion of the potential impact on her and the fetus should be undertaken, and the labour ward coordinator and senior obstetrician informed. This discussion must be clearly documented in the woman's records.

### Women Suitable for Obstetric Consultant Lead Care (CLC)

- All women with medical or obstetric complexity should be offered an obstetric review during pregnancy with a full plan of care formulated for labour and birth.
- At 36 weeks this should include a discussion with the lead professional regarding suitability for different birth settings and the method of fetal monitoring recommended when in labour (NICE, 2022). This discussion should be documented in the All Wales Maternity Record (hand held record).
- Some women under obstetric Consultant led care CLC may be eligible for IA. Individual care plans should be discussed and agreed between the woman and her care giver antenatally, or in labour.
- Women who are CLC and planning to birth on the labour ward may be eligible for IA. Please use the Intermittent Auscultation Assessment Tool (appendix 2) where deemed appropriate. If the intermittent auscultation assessment tool determines that IIA is not suitable then clarify the reasons to the woman and document recommendation for CTG monitoring.

- Midwives must provide women with the information and support they need to make decisions about their care and must respect the decisions that the women make (RCM 2022b). Discuss fetal monitoring options available, facilitate a full evidence-based discussion, explaining best available research evidence or professional option in the absence of research. Ensure understanding of different care models, including the fetal monitoring options available in different birth settings.
- Note If using a hand held doppler practitioners should not rely on the range shown on the screen as there have been instances where the machine has miscalculated the fetal heart rate ( aliasing of maternal pulse)

## Method of IA

## Initial Assessment

An initial assessment using the AWCPNL should be made in conjunction with any antenatal risk factors, birth plans and history as well as the current presenting history & physical assessment.

Where there are maternal or neonatal complexities, but IA is a suitable form of fetal monitoring during labour, please use the IA Initial Assessment Tool (appendix 2).

Irrespective of any previous plan, this assessment will determine:

- The appropriate birth setting
- The appropriate lead professional
- The appropriate fetal monitoring method

## The Method

- Ask about fetal movements (FM) in the last 24 hours.
- An abdominal palpation will determine the optimal position for auscultation.
- Assess the strength and frequency of contractions; Hypertonus (contractions lasting > 2 minutes) or tachysystole (5 or more contractions in 10 minutes) requires further evaluation via CEFM (NICE, 2022).
- IA should be performed using a handheld Doppler or Pinard stethoscope.
- On first auscultation listen for at least one full minute in between contractions, when the baby is at rest, to establish a baseline FH rate. The normal range is 110-160bpm (but, consideration must be given to what is expected for each individual fetus and gestation should be considered).

- Auscultate IMMEDIATELY after the end of a contraction for at least one minute. This will enable identification of decelerations and overshoots if present or confirm the baseline. The end of the contraction is determined by palpating the uterus
- Auscultate during FM or following stimulation of the baby by vaginal examination. An acceleration should be noted, and chronic hypoxia can then be excluded. This can be more difficult to demonstrate in the later stage of labour. The absence of accelerations in established labour is of unknown significance but should be considered as part of the whole clinical picture and actively assessed taking opportunity during fetal movement or on stimulation with vaginal examination to confirm a reassuring clinical picture.
- Fetal activity is a positive feature of fetal wellbeing. FM must be discussed. Auscultation of the FH at the time of FM should reveal acceleration demonstrating a non-hypoxic fetus.
- Variability cannot be assessed using IA (Munro & Jokinen, 2012)
- The maternal pulse should be palpated simultaneously while auscultating the FH to differentiate between the two heart rates, as it is possible to inadvertently pick up the maternal heart rate from surrounding vessels. This should be done in accordance with the AWCPNL and if a FH abnormality is suspected.
- Recommend IA as the method of fetal monitoring during labour where no abnormalities are detected.
- Routine CTG on admission to hospital is not recommended and can increase the risk of caesarean section (NICE, 2017a).

## The 1st Stage of Labour

- After the initial assessment outlined above, the FH should be auscultated IMMEDIATELY after a contraction for at least 1 minute every 15 minutes throughout the first stage. The baseline rate should be determined and recorded as a single figure on the partogram. The presence of accelerations or decelerations should be noted.
- Fetal movements and accelerations are reassuring signs of fetal wellbeing.
- Maternal pulse should be simultaneously undertaken and documented every hour in the 1st stage.
- If FH abnormalities are heard i.e. a rise in baseline rate (of more than 20 beat per minute), decelerations or persistent accelerations after a contraction (overshoots), increase surveillance and auscultate immediately AFTER the next 3 contractions. Consider the clinical picture and identify a possible cause, such as maternal position, fetal movements, vaginal examination/fetal scalp

stimulation, hydration or pool temperature (>37.5$^0$C) which may be affecting maternal & FH rates.

Confirmation of an abnormality warrants CEFM and transfer to obstetric-led care (see table 1) (NICE, 2022; RCM, 2018: FIGO, 2015).

## The 2nd Stage of Labour

(I.e. from full dilatation or other signs of full dilatation in the absence of a vaginal examination).
the fetus and for this reason the identification of this stage is important, so that the appropriate level of fetal monitoring can be performed (RCOG, 'Each Baby Counts', 2020). The onset of the second stage of labour must be clearly documented on any partogram.

- Auscultation of the FH should occur IMMEDIATELY after a contraction for at least 1 minute, every 5 minutes, or more frequently where an abnormality is suspected.
- Ensure it is the FH being auscultated; descent of the fetal head, with increased maternal heart rate increases the likelihood of hearing the maternal pulse.
- Maternal pulse should be taken at every auscultation in the 2nd stage to verify difference in maternal and fetal heart beats and documented at least 15 minutely.
- Confirmation of an abnormality (as outlined above) warrants CEFM in an obstetric setting.

If at any time you are unable to listen to the FH as frequently as required, you must seek help in order to do so.
The assessment of fetal wellbeing is made in conjunction with the overall clinical picture.

N.B. Although a CTG machine utilizes the same technology as the handheld Doppler, it should not be used for intermittent auscultation, as this is an inappropriate use of resources. The handheld Doppler has a narrow beam and is less likely to pick up the maternal sound. It gives a swishing noise when tracked to a blood vessel compared with the electronic heartbeat sounds of the US transducer of a CTG machine.

**REMEMBER*: If using a handheld doppler do not rely on the range shown on the screen, as there have been instances where the machine has miscalculated the FH rate*** (NICE, 2022; MHRA, 2010).

## Conversion criteria when changing from IA to continuous electronic fetal Monitoring (CEFM).

- During the course of pregnancy or labour the clinical circumstances may change. Recommend CEFM if FH abnormalities are identified or further risk factors develop (see appendix 1) this may be in addition to those risk factors already identified (NICE,2022; Physiological-CTG, 2018) where routine CEFM would be advised.
- FH abnormalities identified by IA include an abnormal baseline rate, a rising baseline, presence of decelerations, repetitive overshoots.
- Initial action should be to listen more frequently to confirm your suspicion.
    - Auscultate the FH immediately after the following three consecutive contractions in order to review. In the case of a prolonged deceleration and/or identified bradycardia then CEFM should be recommended along with transfer to the obstetric unit, ongoing assessment via IA is not recommended.

    - Review the whole clinical situation including maternal observations, strength and frequency of contractions, maternal position, hydration, FM or vaginal examination and take action for correctable causes.

- If CEFM is advised the rationale should be discussed with the woman, her consent obtained, and all actions documented in the notes. If CEFM is declined, the potential risks should be explained, and the midwife in charge and obstetric team informed. All discussions must be clearly documented, and the woman supported in her choice
- Provided it is safe and appropriate, transfer the women to the obstetric unit for obstetric review.
- If CEFM has been commenced due to concerns arising during IA but the CTG is classified as normal after a minimum of 20 minutes, it is appropriate to return to IA(RCM, 2018; NICE, 2017a). Continue care within the obstetric setting. A full systematic assessment must be undertaken prior to discontinuing the CTG using the Intrapartum CTG tools and Fresh Eyes approach and rational clearly documented.

## Communication

- Maternal wishes and concerns should be discussed and documented
- The benefits, risks and limitations of intermittent auscultation of the fetal heart in labour should be explained.

- Consent should be sought prior to any interventions.
- The woman should be included in the decision making process regarding her care.

## Education and Training

Health professionals performing, interpreting and managing CTGs and performing intermittent auscultation of the fetal heart during labour should update their skills regularly.

The updates should be multidisciplinary to ensure use of common terminology and shared understanding. Midwives and obstetricians will be allocated:

- 1 day Intrapartum Fetal Surveillance mandatory training
- 3 Reflection sessions to be accessed via professional debate and discussion with a CTG champion, CTG workshops, OCRIM or Midwifery led reflections.
- Completion of IIA e-learning package (Midwives) on elfhc.

## Auditable Standards

- All women will have the fetal heart rate (FHR) monitored and documented in the maternal health record as a minimum every 15 minutes during the first stage of labour and every 5 minutes or after every contraction during the second stage of labour. When using IA the FHR will be auscultated for at least a minute after a contraction, and the baseline rate will be recorded as a single figure.
- The equipment used for IA of the FHR will be in line with guidance. This will be documented in the maternal health care record.
- In all cases when a transfer from IA to CEFM occurs, the timing and reason for transfer will be documented in the AWCPNL. The indication for transfer will be in accordance with the listed indications for CEFM as stated in the guideline.
- The yellow Transfer SBAR form to be completed for all transfers to an obstetric unit (in AWCPNL).
- The maternal pulse will be palpated and documented at the beginning of the intrapartum auscultation in line with the AWCPNL.
- Maternal pulse will be documented hourly in the first stage of labour and at least 15 minutely during the 2nd stage of labour- Maternal pulse will be taken simultaneously to fetal heart auscultation.
- The maternal pulse will be palpated and documented in the maternal health record to differentiate between the two heart rates in all cases when a FHR abnormality is detected.
- In all cases where IA is considered appropriate, the Part 2 of the AWCPNL or the Intermittent Auscultation Assessment Tool will be used.

# References

Alfirevic, Z., Devane, D. & Gyte, G. (2006). Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour. Cochrane Database of Systematic Reviews, Issue 3. Chichester: John Wiley & Sons.

Federation of International Gynaecologists and Obstetricians. (2018). Intrapartum fetal monitoring guidelines. Retrieved from:

https://physiological-ctg.com/guideline/Intrapartum%20Fetal%20Monitoring%20Guideline.pdf

Harding, C. (2012). How to 'listen' for fetal wellbeing. Midwives, 15, 4, 32-33.

Maude, R., Skinner, J. & Foureur, M. (2015). Putting intelligent structured intermittent auscultation (ISIA) into practice. Women and Birth, 29, 285-292.

Medicines and Healthcare products Regulatory Agency. Medical safety alert: Fetal monitor/Cardiotocograph (CTG) – adverse outcomes still reported. Retrieved from https://www.gov.uk/drug-device-alerts/medical-device-alert-fetal-monitor-cardiotocograph-ctg-adverse-outcomes-still-reported

Munro, J. & Jokinen, M. (2012). Evidence based guidelines for midwifery-led care in labour. Intermittent Auscultation (IA). London: RCM.

National Institute for Health and Care Excellence (NICE). (2017a). Intrapartum care for healthy women and babies. HMSO: London.

National Institute for Health and Care Excellence (NICE). (2017b). Addendum to intrapartum care: care for healthy women and babies, Clinical Guideline 190.1. Retrieved from: https://www.nice.org.uk/guidance/cg190/evidence/addendum-190.1-pdf-4365472285

National Institute for Health and Care Excellence (NICE). (2022). Fetal Monitoring in Labour. HMSO:London

National Institute for Health and Care Excellence (NICE). (2023). Intrapartum care. HMSO: London.

Physiological CTG. (2018). Intrapartum fetal monitoring guideline. Retrieved from https://physiological-ctg.com/guideline/guideline.html

Royal College of Midwives. (2018). RCM Midwifery care in labour guidance for all women in all settings. London: RCM.

Royal College of Obstetricians and Gynaecologists. (2015). Each Baby Counts. Retrieved from https://www.rcog.org.uk/globalassets/documents/guidelines/research--audit/each-baby-counts-2015-summary-report-june-2017.pdf

World Health Organisation. (2018). WHO recommendations for intrapartum care for a positive childbirth experience. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/260178/9789241550215-eng.pdf;jsessionid=6F1E51094CFCA529A58F0DF247C4D798?sequence=1

# Appendix 1. Risk factors indicating conversion from Intermittent Auscultation to Continuous Electronic Fetal Monitoring.

| Maternal Assessment | Fetal Assessment |
|---|---|
| Pulse over 120bom on 2 occasions 20/30 mins apart | Undiagnosed breech presentation; transverse or oblique lie (review mode of delivery, including cord presentation |
| A single reading of diastolic blood pressure ≥ 110 mmHg or systolic blood pressure ≥160 mmHg | The presence of meconium |
| Diastolic blood pressure 90 to 109 mmHg or systolic blood pressure of 140 to 159 mmHg on 2 consecutive readings taken 30 minutes apart | Recurrent accelerations (immediately following a contraction i.e. overshoot) |
| Maternal pyrexia (defined as ≥38.0 ºC once or ≥37.5ºC on two occasions 1 hour apart | Fetal heart rate below 110bpm or above 160 bpm, or if it is perceived as inappropriate for gestational age |
| Any vaginal blood loss other than a show | Evidence of a rising baseline on the partogram (More than 20 beats per min from baseline) |
| Persistent pain in between contractions | Persistent decelerations in fetal heart rate confirmed with increased monitoring heard on intermittent auscultation after 3 successive contractions. |
| Epidural or Remifentanyl analgesia | Reduced fetal movements in the last 24 hours |
| Suspected Chorioamnionitis or sepsis | Suspected fetal growth restriction (by USS or symphysis fundal measurement) |
| Confirmed delay in first or second stage of labour | High (4/5-5/5 palpable) or Free-floating head |
| Contractions that last >60 seconds(hypertonous) or occurring more than 5 contractions in 10 minutes (tachysystole) | **If in Doubt always ask a second opinion** |

# Appendix 2. IA Assessment tool.

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**Intermittent Auscultation Assessment Tool**

Affix label

*In the absence of risk factors for fetal hypoxia IA is the recommended method of fetal monitoring regardless of birth setting.*

Use this assessment tool, in all birth settings, for women who are on the obstetric labour pathway and choosing IIA for fetal monitoring.

| | *YES* | *NO* |
|---|---|---|
| No current concerns for fetal wellbeing | | |
| Singleton Pregnancy | | |
| Cephalic Presentation | | |
| Fetal growth is normal with no concerns | | |
| Pre- Labour rupture of membranes for <24 hours prior to the onset of labour? | | |
| Non-significant meconium at time of SROM | | |
| **Intelligent Auscultation of the Fetal Heart (exclude hypoxia)** | | |
| Has there been a normal pattern of fetal movements over the past 24 hours? | | |
| Fetal movements present | | |
| Accelerations heard<br>(Use opportunity with fetal movements, abdominal palpation or vaginal examination). | | |
| Normal baseline rate obtained in between contractions when the fetus is at rest. (listen for at least 1 minute)<br>Lower baseline fetal heart rates are expected with post term pregnancy | | |
| Exclude decelerations & overshoots<br>(Auscultation IMMEDIATELY after a contraction for at least 1 minute). | | |
| Is there a clear difference between fetal and maternal pulse?<br>fetal heart ☐ Maternal pulse ☐ | | |
| Women accept IA as method monitoring | | |

***If "YES" to all the above IA is suitable as per IA Guideline.***

*NOTE: If liquor is clear at the time of rupture of membranes but then develops meconium no longer suitable for IIA.*

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