

# INTRAPARTUM FETAL MONITORING: TRAINING AND COMPETENCY ASSESSMENT

***A best practice resource***

***September 2019***



BACKGROUND



PRINCIPLES FOR  
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## BACKGROUND

In the absence of a national standard for intrapartum fetal monitoring (IFM) training content and competency testing, this interactive document represents a consistent approach to IFM training and competency assessment for London and is applicable to all staff caring for women in labour.

### Aims

- The aim of this resource is to provide a consistent approach to the provision of training in intrapartum fetal monitoring and competency assessment for maternity services in London and reduce the incidence of avoidable harm and improve safety during the intrapartum period.
- This resource represents a revision of the “[Fetal monitoring, competency and assessment: A best practice toolkit](#)” (London Maternity Clinical Network 2015). The resource has been developed by the London Perinatal Morbidity and Mortality working group with input from Trusts across London including many examples of best practice.





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## BACKGROUND

- The basic principle of IFM is to identify hypoxia before it is sufficient to lead to adverse outcomes for babies such as stillbirth, hypoxic brain injury or neonatal death. Poor intrapartum fetal outcomes are the result of many factors and focusing on only one does not provide a solution.
- The updated [Saving Babies Lives Care Bundle Two](#) is part of a government initiative aiming to halve the rate of stillbirths, neonatal deaths, maternal deaths, and neonatal brain injuries occurring at birth or soon after in England by 2025. The Care Bundle's Element 4 outlines strategies to optimise effective fetal monitoring during labour.
- The [Each Baby Counts](#) progress report highlights the need for maternity units to continually appraise their approach to training and competency assessment of healthcare professionals involved in intrapartum fetal monitoring with potential for improved care being identified in 71% of Each Baby Counts cases.
- National and International guidance for intrapartum fetal monitoring is available from [NICE \(Intrapartum Care for Healthy Women and Babies\)](#) and [FIGO \(Intrapartum Fetal Monitoring Guidelines\)](#).
- **It is acknowledged that across London differing guidelines for IFM classification are used. This does not impact the principles outlined within this resource aimed at optimising intrapartum fetal monitoring.**



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## PRINCIPLES FOR INTRAPARTUM FETAL MONITORING TRAINING

**All staff who care for women in labour must complete annual training on cardiotocograph (CTG) interpretation and the appropriate use of intermittent auscultation (IA) and no member of staff should care for women in labour without documented evidence of training within the last year. (SBLCB2)**

- IFM training must ensure local and/or national guidelines for the use of IA and CTG are understood and practised
- IFM training must highlight the importance of the initial assessment of the antenatal and intrapartum maternal and fetal risks (such as fetal growth restriction, previous caesarean section, multiple pregnancy, antepartum haemorrhage and meconium stained liquor) when a woman first presents in labour.
- IFM training should ensure adequate understanding of when to switch from IA to CTG
- Fetal physiological responses to hypoxaemia, the pathophysiology of fetal brain injury, the physiology underlying changes in fetal heart rate, and the impact of factors such as fetal growth restriction and maternal pyrexia on CTG patterns must be included in training.
- Interventions that can affect the fetal heart rate (such as medication) and those that are intended to improve the fetal heart rate should be discussed.

Best Practice  
Examples:

Example Curriculum for IFM  
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IA and Physiology Presentation

EFM Training Slides



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## PRINCIPLES FOR INTRAPARTUM FETAL MONITORING TRAINING

### Training should be multidisciplinary and include training in situational awareness and human factors

- IFM training should include midwives and doctors of all grades and stages of training and ensure all members of the team feel empowered to speak up when they have concerns about fetal wellbeing and escalate appropriately
- Health care professionals must be able to recognise and adapt the care provided when problems are evolving, recognise when there is a transition from normal to abnormal and develop an ability to maintain an objective overview of changing situations including ensuring appropriate support from the team

### Training across London takes many forms:

- Weekly meetings to discuss recent interesting cases
- WhatsApp groups with cases discussed
- Simulation based training within Skills and Drills training days
- Annual Training sessions
- Online training (such as [K2](#), [eFM](#), [Physiological CTG Interpretation](#))
- One-on-one sessions for those requesting them or identified as needing additional support/training

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IA and Physiology Presentation

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## TRAINING IN SITUATIONAL AWARENESS AND HUMAN FACTORS

Training in Situational Awareness and Human Factors is a new recommendation from the Saving Babies Lives Care Bundle 2 and Each Baby Counts reports. The following is an introduction to the essentials that should be covered within this training.

**Culture:** Nothing will change unless we change organisational culture. Strong leadership can change culture.

**Situational Awareness:** In maternity there is a rapid transition between low and high risk clinical situations. Proactively seeking, updating and managing information about clinical situations is vital. [Each Baby Counts](#) recommends that a senior member of staff maintains oversight of the activity within a birth setting; ensuring someone takes this 'helicopter view' will prevent important details or new information from being overlooked and allow problems to be anticipated earlier.

**Stop, think and predict what might happen next.**

**Communication:** The use of tools such as '[SBAR](#)' for structured communication. Multidisciplinary handovers and safety huddles: set times and ad hoc. Clear escalation policies and changes in hierarchical cultures to ensure all members of the team are empowered to speak up when they are concerned about fetal wellbeing.



Best Practice  
Examples:

Situational Awareness and  
Human Factors presentation

Human Factors  
Training SOP

NHS Resolution IFM  
Case Story

SBAR

RCOG Guidance on  
Handover Tools





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## TRAINING IN SITUATIONAL AWARENESS AND HUMAN FACTORS

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### Hungry Angry Late Tired ([HALT](#)) and Window of Circadian Low ([WOCLE](#))

A vital part of teaching Human Factors is the recognition that we are all humans and many factors can influence our clinical performance. A change of culture is needed to ensure breaks are taken by ALL healthcare professionals.

In training, talk about and acknowledge the impact of healthcare professionals personal wellbeing on the women and families they care for. Multidisciplinary huddles during the WOCLE (2-6am) should be standard when making important decisions. Look after your staff both physically and mentally and ensure debriefing of healthcare professionals as well as women and their families becomes standard after serious incidents.



**Training:** All training in Human Factors and Situational Awareness should be multidisciplinary and this can be incorporated into all maternity formal and informal training. Use real clinical scenarios as examples of how Human Factors and Situational Awareness impacts optimal intrapartum care.

Best Practice  
Examples:

Situational Awareness and  
Human Factors presentation

Human Factors  
Training SOP

NHS Resolution IFM  
Case Story

SBAR

RCOG Guidance on  
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## PRINCIPLES FOR IFM COMPETENCY ASSESSMENT

**All qualified staff who care for women in labour must demonstrate that they are competent with intrapartum fetal monitoring and have passed an annual assessment that has been agreed by the local commissioner (CCG) and based on the advice of the Clinical Network.**

**(Saving Babies Lives Care Bundles version 2, 2019)**

Records should be maintained that demonstrate all qualified staff who care for women in labour have passed an annual competency assessment

Trusts should have a standard operating policy (SOP) to manage staff who fail this assessment that is supportive, enabling and timely

The competency assessment process is overseen by the fetal wellbeing leads to ensure its smooth running and the co-ordination and support of those staff who have not passed the competency assessment

**Best Practice  
Examples:**

**Managing those who do not pass Competency  
Assessment**

**Example of Intermittent Auscultation  
Competency Assessment**





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## PRINCIPLES FOR IFM COMPETENCY ASSESSMENT

Owing to a lack of nationally agreed or evidence based formal assessment for intrapartum fetal monitoring, it is not possible to be prescriptive about the exact nature of competency assessments. However, the London Maternity Clinical Network recommend that all Trusts benchmark their assessment against the following principles:

### Principles to be included in competency assessment as agreed by the London Maternity Clinical Network in August 2019

*Benchmark to assess if your Trust Competency Assessment tests these principles:* Yes/No

- Recognition of abnormal fetal heart rates and cardiotocograph patterns
- The appropriate use of intermittent auscultation
- Demonstrate knowledge and understanding of the local escalation policy
- Situational awareness/Human factors
- Fetal Physiology

Best Practice  
Examples:

Managing those who do not pass Competency  
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Example of Intermittent Auscultation  
Competency Assessment



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## ASSESSING FETAL RISK AT ONSET OF LABOUR

### The Essentials:

- All women presenting in labour (irrespective of place of planned birth) should have a formal documented fetal risk assessment to determine whether intermittent auscultation (IA) or continuous tocograph (CTG) is the most appropriate method of intrapartum fetal monitoring for them and their baby ([NICE](#))
- The development of a standardised national risk assessment tool was recommended in the most recent [MBRRACE-UK Perinatal Confidential Enquiry](#) report but at present this has not yet been developed and therefore the use of NICE Intrapartum guidance for risk assessment at the onset of labour is recommended and summarised in the box opposite.
- It is vital that all healthcare staff involved with caring for women in labour are aware of the local/national guidelines that outline the indications for recommending IA or CTG for monitoring of intrapartum fetal wellbeing.



Best Practice  
Examples:

Example of Admission Assessment

Development of a Chronic Hypoxia Sticker



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## ASSESSING FETAL RISK AT ONSET OF LABOUR

### Risk assessment at the onset of Labour (from Saving Babies Lives Care Bundle 2: Appendix E)

Carry out an initial assessment to determine if midwifery led care in any setting is suitable for the woman, irrespective of any previous plan. The assessment should comprise the following:

#### Observations of the woman:

- Review the antenatal notes (including all antenatal screening results) and discuss these with the woman.
- Ask about the length, strength and frequency of her contractions.
- Ask her about any pain she is experiencing and discuss her options for pain relief.
- Record her pulse, blood pressure and temperature, and carry out urinalysis.
- Record if she has any vaginal loss.

#### Observations of the unborn baby:

- Ask the woman about the baby's movements in the last 24 hours.
- Palpate the woman's abdomen to determine the fundal height, the baby's lie, presentation, position, engagement of the presenting part, and frequency and duration of contractions.
- Auscultate the fetal heart rate for a minimum of 1 minute immediately after a contraction. Palpate the woman's pulse to differentiate between the heartbeats of the woman and a baby

#### In addition:

- If there is uncertainty about whether the woman is in established labour, a vaginal examination may be helpful after a period of assessment, but is not always necessary.
- If the woman appears to be in established labour, offer a vaginal examination.

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Example of Admission Assessment

Development of a Chronic Hypoxia Sticker



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# REVIEW OF INTRAPARTUM FETAL WELLBEING DURING LABOUR AND BIRTH

## Intermittent Auscultation (IA):

- All staff using IA to monitor fetal wellbeing in labour should be appropriately trained in:
  - the use of the equipment available in their place of work
  - the appropriate techniques for IA
  - the appropriate timing of IA to accurately assess intrapartum fetal wellbeing (NICE recommends IA for 1 minute after a contraction every 15 minutes in the first stage of labour and at least every 5 minutes in the second stage)
- All staff using IA for intrapartum fetal monitoring should be aware when to switch from IA to CTG
- All staff using IA during labour should document a regular assessment of fetal risk factors to ensure continued use of IA is appropriate
- Regular (at least 2 hourly) review of the partogram is recommended by NICE to ensure a holistic view of the progression of labour and therefore the overall picture of fetal and maternal wellbeing
- Employing a 'fresh ears' approach to intermittent auscultation, whereby a second midwife listens in to the fetal heart rate pattern every hour, may reduce interpretation errors but this is yet to be investigated in a research setting



Best Practice  
Examples:

Intermittent Auscultation Cards

IFM Fresh Eyes Sticker



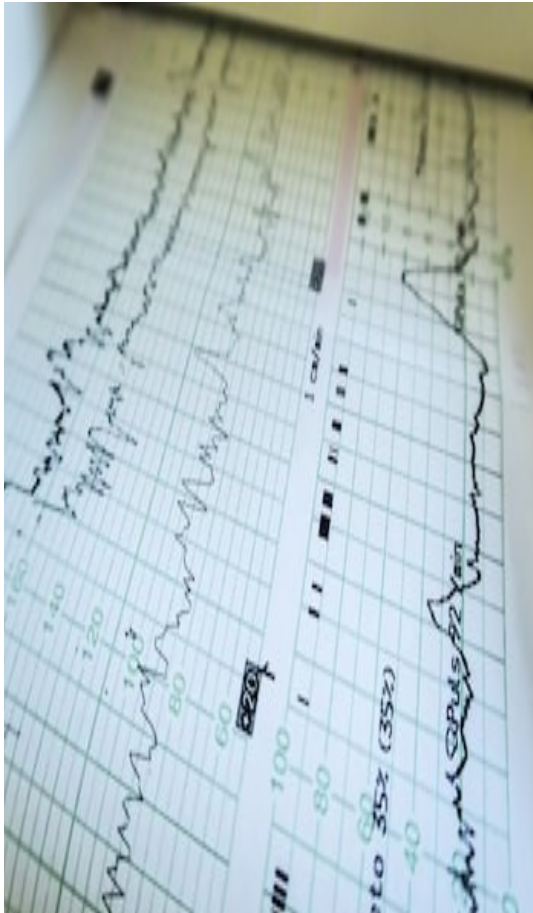
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## REVIEW OF INTRAPARTUM FETAL WELLBEING DURING LABOUR AND BIRTH



### Cardiotocograph (CTG):

- Routine use of a 'Buddy system' or 'Fresh Eyes' approach for regular review of CTG interpretation, with a protocol for escalation if concerns are raised. All staff to be trained in the review system and escalation protocol.
- Accurate written records should be kept demonstrating appropriate assessment of intrapartum fetal wellbeing in compliance with national guidelines.
- Key management decisions should not be based on the CTG alone but should incorporate a holistic view of the full picture including maternal risk factors, stage of labour, and any other signs the baby may not be coping.
- All members of the multidisciplinary team should be aware of the appropriate pathways to escalate their concerns about intrapartum fetal wellbeing, in addition to feeling empowered to speak up when they have ongoing concerns that are not addressed upon initial escalation.

Best Practice  
Examples:

Intermittent Auscultation Cards

IFM Fresh Eyes Sticker



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## ROLE OF INTRAPARTUM FETAL WELLBEING LEADS

A new intervention recommended in the second Saving Babies Lives Care Bundle is formal identification of a Fetal Monitoring Lead for a minimum of 0.4 WTE per consultant led unit. Their role is to improve the standard of intrapartum risk assessment and fetal monitoring.

Within London, this role has often been filled by midwives and brings a number of benefits (see case studies below) but the importance of identification of IFM safety champions throughout the multidisciplinary team should be encouraged.

### Beneficial Interpersonal skills:

- Passion for intrapartum fetal monitoring
- Skills within medical education and training
- Comfortable challenging all members of the MDT

### Useful practices from Leads in London

- Central surveillance
- Visible on labour ward, central monitoring looked at every hour
- Attendance at the war round
- Pre-rotation training
- Weekly CTG huddle, learning from cases
- Audits and spot checks
- Pre-rotation training
- Bed site teaching
- WhatsApp group

Best Practice  
Examples:

Case Studies of IFW Leads

Job Description; Fetal  
Wellbeing Midwife

Job Description; Midwife  
Facilitator & Fetal Wellbeing

Job Description; Intrapartum  
Midwifery Specialist





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## ROLE OF INTRAPARTUM FETAL WELLBEING LEADS

### Aims of the role:

- Development and facilitation of a programme aimed at increasing knowledge and competency in identifying fetal wellbeing and improve clinical decision making
- Produce and embed into practice an 'intelligent intermittent auscultation' training package for midwives providing intrapartum care
- Ensure that all staff undertake training and competency assessment and provide support to staff who need to repeat the competency assessment
- Lead safety workshops, create opportunities for teaching, support and reflections
- Be visible and available on labour ward, birth centre for support and escalation
- Implementation of recommendations arising from investigations
- Ensure that all are assessing fetal wellbeing in the context of the woman's health, pregnancy, gestation and stage of labour by observing how handover is communicated at change of shifts, midwife to doctor communication when referrals are made and listening to assessments made over the telephone (SBAR)
- Ensure that interpretation of fetal assessment is undertaken with a structural approach, reflective of recommendations within the current guidelines and that all documentation reflects this
- Assist in the investigation of incidents pertaining to poor outcomes, implementing any recommendations arising from the investigations

**Best Practice  
Examples:**

Case Studies of IFW Leads

**Job Description Fetal  
Wellbeing Midwife**

**Job Description Midwife  
Facilitator, Fetal Wellbeing**

**Job Description Intrapartum  
Midwifery Specialist**



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## AUDITABLE STANDARDS AND CONTINUOUS LEARNING

### Continuous Learning

**Saving Babies' Lives Care Bundle Version Two highlights the importance of continuous learning to improve Trust level intrapartum fetal care including the following recommendations**

Maternity care providers must examine their outcomes in relation to the interventions, trends and themes within their own incidents where fetal monitoring was likely to have been a contributory factor

Individual Trusts must examine their outcomes in relation to similar Trusts to understand variation and inform potential improvements

***More providers are encouraged to focus improvement in the following areas:***

- Risk assessment of the mother/fetus at the beginning and during labour.
- Interpretation and escalation of concerns over fetal wellbeing in labour

### Auditable Standards

- Percentage of staff who attend annual training on CTG interpretation, intermittent auscultation, human factors and situational awareness
- 
- Proportion of staff who successfully complete their mandatory, annual competency assessment
- 
- The proportion of intrapartum stillbirths, early neonatal deaths and cases of hypoxic brain injury where failures of intrapartum monitoring are identified as a

Best Practice Example:

A pioneer of physiological interpretation of CTG



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## CONTRIBUTORS

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