Document Title:	**FETAL SCALP ELECTRODE**		
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Document type: (Policy/ Guideline/ SOP)	Guideline	**To be followed by:** (Target Staff)	Midwives, Obstetricians, Paediatricians
Ratification Issue Date: (Date document is uploaded onto the intranet)	14th May 2019	**Review Date:**	13th May 2022
Developed in response to:	Intrapartum NICE Guidelines RCOG guideline		
Contributes to HSC Act 2008 (Regulated Activities) Regulations 2014(Part 3); and CQC Regulations 2009 (Part 4) **CQC Fundamental Standards of Quality and Safety:**			9,12
Issuing Division/Directorate:	Women's and Children's		
Author/Contact: (Asset Administrator)	Jenna O'Mahony, Midwife		
Hospital Sites: (tick appropriate box/es to indicate status of policy review i.e. joint/ independent)	✓MEHT □ BTUH □ SUH		
Consultation:	(Refer to page 2)		
Approval Group / Committee(s):	n/a	**Date:**	n/a
Professionally Approved by: (Asset Owner)	Miss Rao, Lead Consultant for Obstetrics and Gynaecology	**Date:**	7th May 2019
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Executive and Clinical Directors (Communication of minutes from Document Ratification Group	**Date:** May 2019	**Distribution Method:**	Intranet & Website. Notified on Staff Focus

Consulted With:	Post/ Approval Committee/ Group:	Date:
Anita Rao/ Alison Cuthbertson	Clinical Director for Women's and Children's Directorate	7th May 2019
Anita Dutta	Consultant for Obstetrics and Gynaecology	
Alison Cuthbertson	Head of Midwifery/ Nursing for Women's and Children's Services	
Chris Berner	Lead Midwife Clinical Governance	
Angela Woolfenden	Lead Midwife Community Services	
Vicky Crawcour	Senior Midwife Labour Ward	
Claire Fitzgerald	Pharmacy	
Deborah Lepley	Warner Library	9th May 2019

Related Trust Policies (to be read in conjunction with)	04071 Policy for Standard Infection Prevention Precautions 04072 Hand Hygiene 06036 Maternity Record Keeping including Documentation in Handheld Records 04265 Fetal Heart Rate Monitoring in Pregnancy and Labour 09079 Management of Normal Labour and Prolonged Labour in Low Risk Patients 04259 Management of meconium stained liquor 09062 Mandatory training policy for Maternity Services (incorporating training needs analysis)

Document Review History:			
Version No:	**Authored/Reviewer:**	**Summary of amendments/ Record documents superseded by:**	**Issue Date:**
1.0	Julie Bishop		January 2005
2.1	Sheena Smith		February 2008
2.2	Sarah Moon	Front sheet, equality and diversity; audit & monitoring update	March 2010
3.0	Sarah Moon		June 2011
3.1	Sarah Moon	Clarification of points 11.0, 12.0 &13.0	July 2012
4.0	Paula Hollis		July 2013
5.0	Paula Hollis		July 2016
6.0	Jenna O'Mahony	Full Review	14th May 2019

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1.0 Purpose

1.1 A fetal scalp electrode (FSE) is used to provide a continuous cardiotocography (CTG) when a satisfactory trace cannot be obtained using external CTG (an abdominal transducer). Refer to the guideline 'Management of normal labour and prolonged labour in low risk patients'; register number 09079.

1.2 Using FSEs can provide an accurate precise tracing assisting in identifying abnormal heart rate changes associated with fetal hypoxia (Refer to the guideline 'Fetal heart rate monitoring in pregnancy and labour'; register number 04265).

2.0 Equality Impact Assessment

2.1 Mid Essex Hospital Services NHS Trust is committed to the provision of a service that is fair, accessible and meets the needs of all individuals.

3.0 Intrapartum Use of a Fetal Scalp Electrode

3.1 In high risk labour where abdominal monitoring is unsatisfactory including:

- Induction of labour;
- Augmentation;
- Epidural anaesthetic;
- Vaginal bleeding;
- Maternal pyrexia;
- Significant meconium stained liquor;
  (Refer to the guideline for 'Management of meconium stained liquor'; register number 04259)
- Prolonged second stage;
  (Refer to the guideline 'Management of normal labour and prolonged labour in low risk patients'; register number 09079)
- Raised BMI (body mass index);
- CTG trace features that fall into the non-reassuring or abnormal categories, according to NICE guidelines.

4.0 Contra-indications for the use of a Fetal Scalp Electrode

- Maternal infection (i.e. HIV, hepatitis viruses, herpes simplex virus);
- Placenta previa is present or suspected;
- When woman is a confirmed carrier of haemophilia and fetus is affected or status is unknown;
- Mal presentation (i.e. face, breech, shoulder, or any other presentation) or when it is not possible to identify fetal presenting part.

5.0 Considerations for the Use of a Fetal Scalp Electrode

5.1 Do not use a FSE if the woman is less than 34+0 weeks pregnant unless all of the following apply:

- It is not possible to monitor the fetal heart rate using either external CTG or intermittent auscultation;
- It has been discussed with a senior obstetrician;
- The benefits are likely to outweigh the potential risks;
- The alternatives (immediate birth, intermittent ultrasound and no monitoring) have been discussed with the woman and are unacceptable to her.

5.2 Discuss with the woman the possible use of a FSE between 34+0 and 36+6 weeks of pregnancy if it is not possible to monitor the fetal heart rate using either external CTG or intermittent auscultation.

5.3 Amniotic membranes must be ruptured prior to attachment of a FSE.

6.0 Risks to the Fetus

6.1 Risks of trauma to the fetal scalp including infection, or rarely a penetrating injury could lead to meningitis, osteomyelitis or intracranial haemorrhage due to vascular injury.

7.0 Consent for Procedure

7.1 Verbal informed consent must be obtained from the patient prior to applying a FSE, and this should be recorded in the patient's healthcare records.

8.0 Procedure for Application of the FSE

8.1 Ensure all equipment is present.

8.2 Assist the patient into the appropriate position, supine with knees bent, hips flexed and feet together.

8.3 Wash hands, open pack and apply sterile gloves to minimise the risk of infection.

8.4 Perform a vaginal examination with consent to confirm the position of the fetus and dilatation of the cervix thus gaining a clear understanding of stage and progress of labour, and ensuring presentation is suitable to proceed with attachment of the FSE.

8.5 Remove the FSE from its package (leave wires locked in the retention notch at the top).

8.6 Insert the FSE until presenting part is contacted, ensuring it is applied to the scalp avoiding the fontanelles or suture lines to minimise scalp trauma. Hold guide tube end flat against presenting part.

8.7 Gently pull out the white grip from the guide tube to release the protection clip.

8.8 With the protection clip released, gently push white grip back in until the spiral tip contacts the presenting part.

8.9 Turn the white grip clockwise – typically 1 full turn using the protection clip as a visual guide. Mild resistance indicates full attachment.

8.10 Release wires from retention notch and remove both guide and drive tubes.

8.11 Insert the FSE connector into the end of the leg plate and attach to the mother using an adhesive sticker or tape, ensuring maternal comfort. Ensure correct application and fetal heart rate is audible and working.

8.12 Assist the patient into a comfortable position.

8.13 Record date, time, and procedure in obstetric notes and CTG tracing.

9.0 Removal of the FSE

9.1 Pull the FSE connector out of the leg plate, grasp the electric wires as close as possible to the fetal presenting part, turn them counter-clockwise until the spiral tip is free from the fetal skin. This can be performed at any time pre/post-delivery as required. Do not pull the spiral tip from the fetal skin.

10.0 Staff and Training

10.1 All qualified midwifery and obstetric staff should be fully trained to perform FSE application and be able to assist midwifery and medical trainee's to learn how to apply a FSE as part of their education and skills where appropriate to ensure safe competent practitioner.

10.2 Although FSEs are a recognised way to monitor the fetal heart when the transabdominal route is unsatisfactory, they can still be unreliable and it can take time to establish a good trace. Good-quality, continuous recordings of both the fetal heart rate and uterine contractions are a critical prerequisite for adequate CTG interpretation.

10.3 All staff have a responsibility to correctly recognise and respond appropriately to fetal heart rate abnormalities. Regular attendance is required at teaching sessions on cardiotocography (CTG) interpretation including mandatory study days, Labour Ward case reviews, clinical audit and perineal mortality meetings.
(Refer to 'Mandatory training policy for Maternity Services (incorporating training needs Analysis); register number 09062)

11.0 Professional Midwifery Advocates

11.1 Professional Midwifery Advocates provide a mechanism of support and guidance to women and midwives. Professional Midwifery Advocates are experienced practising midwives who have undertaken further education in order to supervise midwifery services and to advise and support midwives and women in their care choices.

12.0 Infection Prevention

12.1 All staff should ensure that they follow Trust guideline on infection prevention by washing their hands before and after each examination.
(Refer to point 8.3)

13.0 Audit and Monitoring

13.1 Audit of compliance with this guideline will be considered on an annual audit basis in accordance with the Clinical Audit Strategy and Policy (register number 08076), the Corporate Clinical Audit and Quality Improvement Project Plan and the Maternity annual audit work plan; to encompass national and local audit and clinical governance identifying key harm themes. The Women's and Children's Clinical Audit Group will identify a lead for the audit.

13.2 The findings of the audit will be reported to and approved by the Multi-disciplinary Risk Management Group (MRMG) and an action plan with named leads and timescales will be developed to address any identified deficiencies. Performance against the action plan will be monitored by this group at subsequent meetings.

13.3 The audit report will be reported to the monthly Directorate Governance Meeting (DGM) and significant concerns relating to compliance will be entered on the local Risk Assurance Framework.

13.4 Key findings and learning points from the audit will be submitted to the Clinical Governance Group within the integrated learning report.

13.5 Key findings and learning points will be disseminated to relevant staff.

14.0 Guideline Management

14.1 As an integral part of the knowledge, skills framework, staff are appraised annually to ensure competency in computer skills and the ability to access the current approved guidelines via the Trust's intranet site.

14.2 Quarterly memos are sent to line managers to disseminate to their staff the most currently approved guidelines available via the intranet and clinical guideline folders, located in each designated clinical area.

15.0 Communication

15.1 A quarterly 'maternity newsletter' is issued to all staff to highlight key changes in clinical practice to include a list of newly approved guidelines for staff to acknowledge and familiarise themselves with and practice accordingly. Midwives that are on maternity leave or 'bank' staff have letters sent to their home address to update them on current clinical changes.

15.2 Approved guidelines are published monthly in the Trust's Staff Focus that is sent via email to all staff.

16.0 References

National Institute for Health and Care Excellence (2014) Intrapartum care for healthy women and babies. Clinical Guideline (CG190). London: NICE https://www.nice.org.uk/guidance/cg190

National Institute for Health and Care Excellence (2015) Preterm labour and birth. NICE Guideline [NG25] London: NICE nice.org.uk/guidance/ng25

Nursing Midwifery Council (2015) The Code – Professional standards of practice and behaviour for nurses and midwives and nursing associates London: NMC

Royal College of Obstetricians and Gynaecologists.(2017) Each Baby Counts. 2015 full report. London: RCOG

Appendix 1: Preliminary Equality Analysis

This assessment relates to: Fetal Scalp Electrode (08010)

A change in a service to patients		A change to an existing policy	**X**	A change to the way staff work	
A new policy		Something else (please give details)			

Questions	Answers
1. What are you proposing to change?	Full Review
2. Why are you making this change? **(What will the change achieve?)**	3 year review
3. Who benefits from this change and how?	Patients and clinicians
4. **Is anyone likely to suffer any negative impact as a result of this change?** If **no**, please record reasons here and sign and date this assessment. If **yes**, please complete a full EIA.	No
5. a) Will you be undertaking any consultation as part of this change? **b) If so, with whom?**	Refer to pages 1 and 2

Preliminary analysis completed by:

Name	Jenna O'Mahony	**Job Title**	Midwife	**Date**	May 2019