Learning Activity Package

Fetal Scalp Electrode Placement

Name: ........................................................................

Ward/Unit: ..................................................................

Facility: .....................................................................

Date Completed: ....................................................... 

Please return to relevant Educator on completion of all requirements of this learning activity package

Date received by Educator: ...........................................

Date of Original Package Development: 1 April 2015

Endorsed by: : NNSW LHD Maternity Services Committee, NNSW LHD Maternity Education Committee 

Approved by: NNSW LHD Maternity Education Committee

Signature: 

Date: April, 2015

Version: One

Review Date: April 2016

1 The term Educator relates to context of Nursing and Midwifery practice and encompasses CNE, CME, NE and ME roles
# Table of Contents

Statement of Indemnity ................................................................. 3  
Disclaimer.............................................................................. 3  
Statement of Copyright .......................................................... 3  
Acknowledgements.................................................................. 3  
Related National Competency Standards for RN/ ENs .................. 3  
Related NSQHS Standards ......................................................... 4  
Related Australian Qualifications Framework Criteria (AQF) ......... 4  
Related Documents .................................................................... 4  
Learning Resources Required for Completion of LAP .................. 4  
Prerequisite Learning Requirements ........................................... 4  
Recognition of Prior Learning ..................................................... 5  
Resource Persons ....................................................................... 5  
Guidelines for completion of this Learning Activity Package ........... 5  
Time Required for Completion .................................................... 5  
Frequency of Completion .......................................................... 5  
Activity Icons ........................................................................... 6  
Overview of the Learning Activity Package ................................. 6  
Aims ............................................................................................. 6  
Learning Outcomes .................................................................... 6  
Assessments ............................................................................... 7  
Who Can Conduct competency assessments ................................. 7  
Part 1 ........................................................................................... 8  
Powerpoint Presentation ............................................................. 11  
Part 2 ........................................................................................... 12  
Evaluation/Feedback Mechanism ............................................... 13  
Competency Assessment Tool .................................................... 14  
Evaluation/Feedback Tool .......................................................... 16  
References .................................................................................. 17
Statement of Indemnity
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Acknowledgments

NNSW LHD Maternity Education Group

Related National Competency Standards for the Registered/ Enrolled Nurse/ Midwife (formally ANMC competencies)
[Click here to insert relevant Competency Standards]
Related National Safety and Quality in Health Care Standards (NSQHS)
Standard 1 – Governance for Safety and Quality in Health Service Organisations
Standard 2 – Partnering with Consumers.
Standard 3 – Preventing and Controlling Healthcare Associated Infection
Standard 7 – Blood and Blood Products
Standard 9 – Recognising and Responding to Clinical Deterioration in Acute Health Care

Related Australian Qualification Framework Criteria (AQF)
[Click here to insert relevant AQF Criteria]

Related Documents
Policies, Procedures and Guidelines

GL2016_001 Maternity – Fetal Heart Monitoring
NC-NNSW-GUI-6865-13 Care of the Woman in Labour Guideline

Other relevant documents
[Click here to insert relevant documents]

Learning Resources Required for Completion of this Learning Activity Package
- Associated readings / references

[Click here to insert relevant Learning Resources]

Prerequisite Learning Requirements
(Participants must have completed the following learning requirements prior to commencing this Learning Activity Package)

K2 package
Recognition of Prior learning

“Recognition of prior learning is an assessment process that involves assessment of an individual’s relevant prior learning (including formal, informal and non-formal education) to determine the credit outcomes of an individual’s application for credit.” (AQFC, 2012). Participants can seek recognition of prior learning for this learning activity package or sections of this package providing they can show evidence of successful completion of similar learning. This process should occur in consultation with the relevant Educator prior to commencement of this package.

Resource Persons

Clinical Midwifery Educators

Guidelines for completion of this Learning Activity Package

- Please make sure you are familiar with all of the above documents prior to commencing this learning activity package.
- Participants are required to achieve a 85% mark or greater for this learning activity package.
- Should participants not achieve this mark, consultation with the Educator should occur to determine further education and direction for re-completion of required tasks
- The information and answers provided by participants in this learning activity package is of a confidential nature and will only be accessed by the Educator, and the relevant administration officer (if required for data collection purposes).

Time Required for Completion of this Learning Activity Package

This is a self-directed learning activity package which may be completed at the learner’s own pace. However, it is anticipated that the clinician may be able to complete the package in a time-frame of 1 hour.

Frequency of completion of this Learning Activity Package

This learning activity package is required to be completed by staff members once only.
Activity Icons

You will find a range of symbols used throughout the package to assist in quick recognition of the current activity, these icons have been indicated below.

<table>
<thead>
<tr>
<th>Reading</th>
<th>Activity</th>
<th>Memory Jogger</th>
<th>Clue</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Reading Icon" /></td>
<td><img src="image" alt="Activity Icon" /></td>
<td><img src="image" alt="Memory Jogger Icon" /></td>
<td><img src="image" alt="Clue Icon" /></td>
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</tbody>
</table>

Overview of the Learning Activity Package

Aims
To provide the clinician with the required knowledge and skill, to enable the facilitation and safe application of a fetal scalp electrode.

Learning outcomes

- To assist Midwives in developing the knowledge and skills to apply a fetal scalp electrode
- Identify indications for use
- Be aware of contraindications and risks
Assessment
The FSE Application package provides a framework for midwives to achieve and maintain accreditation to facilitate the application of fetal scalp electrodes in labour within the NNSW LHD.

The FSE Application in labour is a 3 part process to attain accreditation:

1. Attend FSE application inservice
2. Complete Quiz
3. Complete competency tool

Who can conduct competency assessment for this package?

Clinical Midwifery Educators or Clinical Midwifery Specialists
PART 1

Inservice Information & Power Point Presentation

Fetal Scalp Electrode Placement Information

Internal monitoring of the fetal heart rate gives direct fetal ECG. It is the most accurate way of assessing baseline variability and contact is maintained throughout periods of both maternal and fetal movement. It provides a technically clear pattern as opposed to external monitoring and there is reduced monitor artefact. Interference can occur from rubbing against the cervix, which makes it hard to read.

FSE may allow greater mobility and position choice for the mother. However it is an invasive procedure, expensive and has the potential for trauma to both mother and fetus. The correct presenting part must be accessible and can create a site for possible fetal infection.

Fetal scalp electrodes may be applied by midwives who are experienced to do so in patients with:

- Planned vaginal delivery
- >37 weeks gestation
- Singleton fetus
- Vertex presentation; and
- Ruptured amniotic membranes.

INDICATIONS:

- Poor external record of FHS by auscultation or non-reassuring EFM. (ie. Fetal distress)
- Non-reassuring/pathological Fetal Heart Rate Pattern
- Obese women resulting in poor/difficult external trace.

CONTRAINDICATIONS:

- Maternal blood borne diseases (HIV, HCV, PCR, RNA, HBsAg, active herpes lesions)
- Maternal blood clotting risk factors (carrier of hemophilia)
- Known neonatal clotting disorders
- Intact membranes
- Breech presentation (or when it is difficult to identify fetal presenting part)
- Premature infants <37 weeks
RISKS:

- Fetal eyelid/eye lacerations
- Fetal scalp cellulitis
- Fetal scalp abscess, ulceration, necrosis
- Fetal meningitis (rare)
- Subarachnoid penetration, intracranial hemorrhage
- Acute meningoencephalitis
- Chorioamnionitis
- Endometritis
- Damage to cervix
- Cord prolapse (secondary concern)

PRINCIPLES

- Membranes must be ruptured and the cervix at least 1 cm dilated.
- Scalp electrode must not be applied to the maternal cervix or genitalia or fetal face or fontanelles, suture lines, genitalia or any portion of the fetal body not identified.
- The presenting part must be at least station –2 and be well applied to the cervix to minimise the risk of cord prolapse.
- To be avoided in the presence of maternal infection e.g. Hep B&C, HIV, and STD’s Herpes.
- Aseptic technique throughout.

Equipment

- Gloves and eyewear
- Protective sterile gloves
- Water-based lubricant
- Sterile disposable scalp electrode
- Fetal scalp electrode lead
- Leg plate
- Fetal Scalp attachment lead
- Tocotransducer
- Electronic Fetal Monitoring (EFM) machine
- EFM paper
- EFM strap
**Procedure**

1. Explain procedure, discuss indications and risks for procedure and obtain informed consent.
2. Ensure necessary equipment is available and in working order.
3. Raise bed to appropriate level for easy access.
4. Perform abdominal palpation.
5. Aseptic hand wash and don sterile gloves.
6. Check fetal scalp electrode.
7. Perform vaginal examination and clearly identify the presenting part and cervical dilatation.
8. Ensure electrode is retracted within guide tube.
9. Part the labia and position guide tube in the vagina.
10. Place guide tube firmly against the presenting part ensuring that no part of the cervix or genitalia is entrapped. Advance inner tube with electrode until it reaches the presenting part and apply firm pressure.
11. Maintain pressure against the presenting part and with the other hand rotate the locking handle clockwise 360 degrees until mild resistance is felt on electrode. This indicates attachment.
12. Release the locking device by pressing the clip; carefully slide the inner and outer tubes off the electrode wires while holding the clip.
13. Keep fingers in the vagina. Check that FSE has been applied and is in the correct position.
14. Withdraw fingers, remove gloves, wash hands.
15. Apply electrode to leg plate and attach to woman’s leg and plug electrode wires into the ECG cable.
16. Take and record maternal pulse.
17. Label the EFM trace according to hospital policy.
18. To remove the electrode, explain and obtain informed consent, grasp and twist Counter clockwise until free, do not pull the electrode.

**Documentation**

- Record in the patient medical records including informed consent and plan.
- Record on the partogram.
- Document on the EFM.
PART2

Quiz

Questions:

What are the indications for use of a Fetal Scalp Electrode?

Outline three Potential Risks

List three contraindications for a FSE

Outline the main principles of FSE application

Explain how you would remove a FSE
**Evaluation / Feedback Mechanism**

Please take some time to complete the attached evaluation/feedback tool and return to your Educator. Your feedback will allow for the ongoing improvement of this learning activity package into the future. We appreciate your honesty and input. Thank you

<table>
<thead>
<tr>
<th><strong>Fetal Scalp Electrode Placement</strong></th>
</tr>
</thead>
</table>

**Demonstrates:** Knowledge and ability to effectively and safely perform Fetal Scalp Electrode Placement.

**Relevant National Safety & Quality Health Service Standards (NSQHS):**
- Standard 1 – Governance for Safety and Quality in Health Service Organisations
- Standard 2 – Partnering with Consumers.
- Standard 3 – Preventing and Controlling Healthcare Associated Infection
- Standard 7 – Blood and Blood Products
- Standard 9 – Recognising and Responding to Clinical Deterioration in Acute Health Care

**Relevant National Competency Standards for RN/RM/EN (Formally ANMC Competencies):**
- **Legal and professional practice Competency 1** Functions in accordance with legislation and common law affecting midwifery practice
- **Midwifery knowledge and practice Competency 3** Communicates information to facilitate decision making by the woman
- **Competency 5** Assesses, plans, provides and evaluates safe and effective midwifery care.
  - **Element 5.1** Uses midwifery knowledge and skills to facilitate an optimal experience for the woman.
- **Competency 13** Acts to enhance the professional development of self and others.
  - **Element 13.1** Assesses and acts upon own professional development needs.
- **Competency 14** Uses research to inform midwifery practice.
  - **Element 14.1** Ensures research evidence is incorporated into practice

**Prior Learning:** *(please state if not applicable)*
- K2

| **Assessor Name:** ................................. | **Designation:** ................................. |
| **Participants Name:** ................................. | **Designation:** ................................. |
### Confirmation of assessment details by participant

**I confirm that:**
- The purpose of this assessment has been clearly explained to me
- I am aware of the underpinning education and requirements as documented above
- The performance criteria to be used in this assessment has been discussed with me and I am aware that I will be assessed against these criteria
- I have been given fair notice of the date, time and venue of this assessment
- I am aware of how the assessment will be completed and the requirements relating to this assessment

Participant’s signature: __________________________

Date: __________________________

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>I- Independent</th>
<th>S- Supervised</th>
<th>A- Assisted</th>
<th>M- Marginal</th>
<th>D- Dependant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demonstrates knowledge of fetal scalp electrode placement</strong></td>
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</tr>
<tr>
<td>▶ Completes K2, attended inservice, completes Quiz</td>
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<td>▶ Complies with relevant policies and procedures.</td>
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<tr>
<td>▶ Familiar with and can access [Click here to insert information]</td>
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<tr>
<td>▶ Identifies indications for procedure</td>
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**Demonstrates Safe Practice**
- Adheres to relevant Work Health and Safety Guidelines
- Seeks assistance when required

**Provides evidence of therapeutic interaction**
- Informs patient and gains verbal consent for the procedure
- Performs hand hygiene

**Preparation for procedure**
- Prepares surface where preparation will occur
- Gathers equipment
- Performs hand hygiene
- Positions patient appropriately for procedure
- Performs hand hygiene
- Dons gloves and PPE appropriate for the procedure
- Uses aseptic technique to prepare and maintain sterile filed through the procedure

**Performs Procedure**
- Explain procedure, discuss indications and risks for procedure and obtain informed consent.
- Ensure necessary equipment is available and in working order
- Raise bed to appropriate level for easy access.
- Perform abdominal palpation
- Aseptic hand wash and don sterile gloves.
- Check fetal scalp electrode
- Perform vaginal examination and clearly identify the presenting part and cervical dilatation.
- Ensure electrode is retracted within guide tube.
- Part the labia and position guide tube in the vagina.
- Place guide tube firmly against the presenting part ensuring that no part of the cervix or genitalia is entrapped. Advance inner tube with electrode until it reaches the presenting part and apply firm pressure.
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- Withdraw fingers, remove gloves, wash hands.
- Apply electrode to leg plate and attach to woman's leg and plug electrode wires into the ECG cable.
- Take and record maternal pulse.
- Label the EFM trace according to hospital policy
- To remove the electrode, explain and obtain informed consent, grasp and twist counter clockwise until free, do not pull the electrode

**Completion of procedure**
- Removes gloves and PPE without contaminating self of the environment
- Performs hand hygiene
- Cleans equipment, replaces stock and discards waste appropriately
- Performs hand hygiene
- Completes relevant documentation

**Demonstrates ability to link theory to practice**
- Demonstrates problem solving abilities
- Demonstrates ability to reflect on performance

To achieve competency, each relevant performance criteria must be performed and observed as being correct by the assessor and/or have been recognised as credit for prior learning.

<table>
<thead>
<tr>
<th>Assessment Outcome</th>
<th>Competent</th>
<th>Not Yet Competent</th>
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</thead>
<tbody>
<tr>
<td>Assessor Feedback:</td>
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<tr>
<td>Assessor Signature:</td>
<td>……………………………………….. Date: ……./…./…..</td>
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<tr>
<td>Participant’s Reflection on practice:</td>
<td>..........................................................</td>
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<tr>
<td>Participants Signature:</td>
<td>……………………………………….. Date: ……./…./…..</td>
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<tr>
<td>Action/ further training required (including timeframe/s):</td>
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<tr>
<td>Reassessment must be completed by: Date: ……../…../…..</td>
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</table>
Please take some time to complete the attached evaluation/feedback tool and return to your Educator. Your feedback will allow for the ongoing improvement of this learning activity package into the future. We appreciate your honesty and input. Thank you.

Please read the following statements. Using the scale please place a tick in the column that best represents your opinion. Add comments where you believe these are warranted.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Not applicable</th>
</tr>
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<tbody>
<tr>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
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**Statement**

<table>
<thead>
<tr>
<th>This package was an effective learning activity</th>
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<tbody>
<tr>
<td>Comments:</td>
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<table>
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<tr>
<th>The package content was easy to work through</th>
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<tr>
<td>Comments:</td>
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<tr>
<th>The information I required to complete the activities was easily available.</th>
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<tr>
<td>Comments:</td>
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<table>
<thead>
<tr>
<th>I completed the package in the time specified</th>
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<tbody>
<tr>
<td>Comments:</td>
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<table>
<thead>
<tr>
<th>I had access to a computer to complete the sections of the package that required such access.</th>
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<tr>
<td>Comments:</td>
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Please add any further comments:  
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Thank you for taking the time to complete the evaluation and feedback form.

Date: …/…../20....
References

