FAILED INTUBATION IN OBSTETRIC PATIENTS - CLINICAL GUIDELINE

1. Aim/Purpose of this Guideline
   1.1. To give guidance to obstetric anaesthetists in the management of a failed intubation in an obstetric patient.

2. The Guidance
   2.1. Definition
   A failed intubation in obstetrics is one that is not accomplished following a single dose of Suxamethonium.

   2.2. Incidence
   The incidence of failed intubation has been shown to be as high as 1 in 250 in obstetric patients.

   2.3. Background
   Failed tracheal intubation is an important factor contributing to maternal morbidity and mortality and can delay the delivery of the compromised foetus.
   Anaesthetists cannot always predict difficult intubations, but the following can minimise the risk:
   - Adequate assessment of the airway pre-operatively
   - Having adjunctive airway equipment available
   - Having a robust plan for the management of a failed intubation (Failed Intubation Drill)

2.4. Pre-operative assessment
   An anaesthetic risk assessment should be completed at booking by the midwife and should any single risk factor be identified an anaesthetic referral made.
   An anaesthetic assessment should be arranged and should include;
   2.4.1. Assessment of the airway
   - Mouth opening (should be greater than 3 finger breadths)
   - Mallampatti view
   - Jaw slide (to push lower incisors anterior to the upper incisors)
   - Neck size and movement (full range of movement – 90 degrees)
   - Large protruding incisors

POLICY UNDER REVIEW
Please note that this policy is under review. It does, however, remain current Trust policy subject to any recent legislative changes, national policy instruction (NHS or Department of Health), or Trust Board decision. For guidance, please contact the Author/Owner.
• Weight (original booking weight)
• Presence of large breasts
• Evidence of laryngeal swelling e.g. Pre-eclampsia, Acute Upper Respiratory Tract Infection (URTI)
• History of previous problems
• Full stomach

2.4.3. Preparation of the woman
• Administer antacid medication – Ranitidine/Metoclopramide/Sodium Citrate
• An explanation of the Rapid Sequence Induction to the mother

2.5. Equipment
Should include, but not exhaustive:
• Selection of Laryngoscopes (long and short, McCoy, Polio blades)
• Selection of tracheal tubes
• Gum elastic bougie
• Selection of oral and nasal airways
• Laryngeal Mask Airways (LMA), LMA, ILMA’s/Proseal LMA’s sizes 3&4
• Quick Trac kit
• Cricothyrotomy kit

2.6. Plan
At the end of this guideline is a clear flow diagram (Appendix 3) to explain the sequence of events following a failed intubation.

2.7. Important points
The prime aim of the failed intubation drill is to keep the mother oxygenated. Regional anaesthesia is preferred to a general anaesthetic for delivery of the distressed neonate by caesarean section unless contraindicated. Maternal welfare always takes precedence over fetal compromise. Morbidly obese women should not be anaesthetised by trainees without senior consultation.

2.8. Hints and Tips
• Make sure that your patient is in the optimum position, with a decent pillow (for good head position) prior to commencing the rapid sequence induction
• Draw up an adequate dose of Suxamethonium (Note: at a dose of 1.5mg/kg this = more than 100mg for some patients)
• Have a second syringe full of Suxamethonium drawn up just in case you drop the first syringe on the floor during induction
• Ensure adequate pre-oxygenation time as this increases the time you have to view the larynx
• DO NOT GIVE A 2ND DOSE of SUXAMETHONIUM no matter how tempting
• Most obstetric anaesthetists will use a smaller endotracheal tube (ETT) when performing a rapid sequence induction
• If at first you cannot see the larynx, move the ODP’s hand as the cricoid pressure may distort your view. If you need to, ease the cricoid pressure to obtain a better view of the larynx
• Post-operatively the mother must be counselled about the difficult intubation
2.9. **Training and awareness**
Annual training to be carried out by all the anaesthetists that work on the obstetric unit.

2.10. **Documentation**
There should be clear documentation in the maternal records as to the events and treatment administered.

### 3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>All cases of failed intubation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Anaesthetic Risk Management Lead.</td>
</tr>
<tr>
<td>Tool</td>
<td>All cases of failed intubation will be reported via the trusts electronic reporting system (Datix) and reviewed at the clinical incident review meeting.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Every case</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Individual feedback for each case. Any training needs identified to be reported to the anaesthetic training lead consultant.</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Any action plans will be monitored though the Maternity Risk Management Forum.</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>One to one individual feedback. Training needs addressed through Consultant Anesthetic Training Lead.</td>
</tr>
</tbody>
</table>

### 4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ‘Equality, Diversity & Human Rights Policy’ or the [Equality and Diversity website](#).

**4.2. Equality Impact Assessment**
The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>FAILED INTUBATION IN THE OBSTETRIC PATIENT – CLINICAL GUIDELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>17\textsuperscript{th} July 2015</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>31\textsuperscript{st} July 2015</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>31\textsuperscript{st} July 2018</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Dr Sam Banks Obstetric and Gynaecology Directorate</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 253132</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>To give guidance to obstetric anaesthetists in the management of a failed intubation in an obstetric patient</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Failed, intubation, general, anaesthetic, emergency, obstetric, GA</td>
</tr>
<tr>
<td>Target Audience</td>
<td>RCHT \checkmark PCH CFT KCCG</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>17\textsuperscript{th} July 2015</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>Failed intubation in obstetric patients</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Obstetric Consultant Anaesthetists Meeting Maternity Guidelines Group Obs and Gynae Directorate Divisional Board for noting</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Head of Midwifery</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Not required</td>
</tr>
<tr>
<td>Signature of Executive Director giving approval</td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td>Publication Location (refer to Policy on Policies – Approvals and Ratification):</td>
<td>Internet &amp; Intranet \checkmark Intranet Only</td>
</tr>
<tr>
<td>Document Library Folder/Sub Folder</td>
<td>Clinical Midwifery/Obstetrics</td>
</tr>
</tbody>
</table>
Related Documents:

- Obstetric Anaesthetist Association website – www.oaa-anaes.ac.uk
- Royal College of Anaesthetists website – www.rcoa.ac.uk

Training Need Identified? Training on-going though training log books.

Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2006</td>
<td>V1.0</td>
<td>Initial Issue.</td>
<td>Dr Bill Harvey Consultant Anaesthetist.</td>
</tr>
<tr>
<td>December 2009</td>
<td>V1.1</td>
<td>Addition of a flow chart.</td>
<td>Dr Catherine Ralph Consultant Anaesthetist.</td>
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</tbody>
</table>
February 2012  V1.2  Addition of compliance monitoring table.  Dr Catherine Ralph Consultant Anaesthetist.

17th July 2015  V1.3  Minor change: Spontaneously Breathing following General Anaesthetic: Proceed with caution  Dr Sam Banks Consultant Anaesthetist

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document
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### Appendix 2. Initial Equality Impact Assessment Form

<table>
<thead>
<tr>
<th>Name of Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as <em>policy</em>) (Provide brief description):</th>
<th>FAILED INTUBATION IN OBSTETRIC PATIENTS – CLINICAL GUIDELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directorate and service area:</td>
<td>Obstetrics &amp; Gynaecology</td>
</tr>
<tr>
<td>Is this a new or existing Policy?</td>
<td>Existing</td>
</tr>
<tr>
<td>Name of individual completing assessment:</td>
<td>Elizabeth Anderson</td>
</tr>
<tr>
<td>Telephone:</td>
<td>01872 252879</td>
</tr>
<tr>
<td><strong>1. Policy Aim</strong> *</td>
<td>To give guidance to obstetric anaesthetists in the management of a failed intubation in an obstetric patient.</td>
</tr>
<tr>
<td>Who is the strategy / policy / proposal / service function aimed at?</td>
<td></td>
</tr>
<tr>
<td><strong>2. Policy Objectives</strong> *</td>
<td>To appropriately manage a failed intubation incident in the obstetric patient.</td>
</tr>
<tr>
<td><strong>4. How will you measure the outcome?</strong></td>
<td>As per Compliance Monitoring Tool.</td>
</tr>
<tr>
<td><strong>5. Who is intended to benefit from the policy?</strong></td>
<td>Obstetric patients undergoing general anaesthesia.</td>
</tr>
<tr>
<td><strong>6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?</strong></td>
<td>No</td>
</tr>
<tr>
<td>*<em>b) If yes, have these <em>groups been consulted?</em></em></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>C). Please list any groups who have been consulted about this procedure.</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>

**7. The Impact**

Please complete the following table.

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>X</td>
<td></td>
<td>All pregnant women</td>
</tr>
<tr>
<td>Sex (male, female, trans-gender / gender reassignment)</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
<tr>
<td>Race / Ethnic communities /groups</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
<tr>
<td>Disability - learning disability, physical disability, sensory impairment and mental health problems</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
<tr>
<td>Religion / other beliefs</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
<tr>
<td>Marriage and civil partnership</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>X</td>
<td>All pregnant women</td>
<td></td>
</tr>
</tbody>
</table>

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation - this excludes any policies which have been identified as not requiring consultation. or Major service redesign or development

8. Please indicate if a full equality analysis is recommended.  
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

9. If you are not recommending a Full Impact assessment please explain why.

N/A

Signature of policy developer / lead manager / director

Sam Banks

Date of completion and submission  
17th July 2015

Names and signatures of members carrying out the Screening Assessment

1. Elizabeth Anderson  
2.  

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,  
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,  
Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust’s web site.

Signed: Elizabeth Anderson

Date: 17th July 2015
Appendix 3: Failed Intubation Drill

**Poor view or failed 1st attempt**

2nd ATTEMPT AT INTUBATION
- Adjust head/ pillow
- Ease Cricoid Pressure
- Use a Bougie
- Use a Different Blade: McCoy/Polio
- **Do Not** Give 2nd dose of Suxamethonium

If Successful
Proceed with Surgery

**FAILED INTUBATION**
1. Declare ‘Failed Intubation’
2. Call for Senior Help
3. Maintain Cricoid Pressure
4. Ventilate 100% Oxygen
5. Do not turn patient

Instruct some one to call (Bleep 2100) for Immediate senior anaesthetic assistance

Ventilation Possible?

YES

Failed Ventilation
- Guedel Airway, 2-Hand Ventilation
- Ease Cricoid Pressure
- LMA/ Proseal/ ILMA 2 x attempts MAX

NO

Urgent Delivery?

Yes

Ventilation Possible?

YES

Spontaneously Breathing
General Anaesthetic: Proceed with caution
1. Maintain Airway
   - Mask
   - Mask & Guedel
   - LMA/ Proseal/ILMA
2. Give 100% Oxygen
3. Use a High Concentration of

NO

Wake Patient Up:
1. Turn Lateral
2. Give 100% Oxygen
3. Get Senior Help
4. Consider Alternatives
   - Spinal
   - Epidural
   - Awake Fibreoptic

CAN’T INTUBATE, CAN’T VENTILATE, CAN’T OXYGENATE
Proceed with Surgical Airway:
- Quick Trac/ Needle Cricothyrotomy
- Tracheostomy
   (LAST RESORT)

No