Failed intubation
Study 03/08

Data Collection Form - CASE

Please report all women delivering between 1st April 2008 and 31st March 2010.

Case Definition:
Any woman of over 20 weeks gestation given a general anaesthetic (whether on delivery suite or another hospital department) where failed intubation has occurred.

Failed Intubation is defined as failure to achieve tracheal intubation during a rapid sequence induction for obstetric anaesthesia, thereby initiating a failed intubation drill.

Please return the completed form to:

UKOSS
National Perinatal Epidemiology Unit
University of Oxford
Old Road Campus
Oxford
OX3 7LF

Fax: 01865 289701
Phone: 01865 289714

Case reported in: ____________________________
**Section 1: Woman’s details**

1.1 Year of birth

1.2 Ethnic group* (enter code, please see back cover for guidance)

1.3 Marital status  
   - single □  
   - married □  
   - cohabiting □

1.4 Was the woman in paid employment at booking?  
   - Yes □  
   - No □  

   If Yes, what is her occupation

   ____________________________________________

   If No, what is her partner’s (if any) occupation

   ____________________________________________

1.5 Height at booking (cm)

1.6 Weight at booking (kg)

1.7 Smoking status  
   - never □  
   - gave up prior to pregnancy □  
   - current □  
   - gave up during pregnancy □

**Section 2: Previous Pregnancies**

2.1 Gravidity  
   - Number of completed pregnancies 24 weeks and beyond □  
   - Number of pregnancies less than 24 weeks □

   *If no previous pregnancies, please go to section 3.*

2.2 Did the woman have any previous pregnancy problems?*  
   - Yes □  
   - No □  

   If Yes, please specify

   ____________________________________________

2.3 Previous LSCS under general anaesthesia

   - Yes □  
   - No □  

   If Yes, was there

   - Documented difficult intubation □  
   - Failed intubation □  
   - None documented □

*For guidance please see back cover
Section 3: Previous Medical History

3.1 Previous or pre-existing medical problem* Yes ☐ No ☐
   If Yes, please specify __________________________

3.2 Previous surgical procedures under general anaesthesia Yes ☐ No ☐
   If Yes, was there
   Documented difficult intubation ☐ Failed intubation ☐ None documented ☐

3.3 Predictors of difficult intubation. Please record the following or tick if not documented.

   Not documented
   Mallampati score* ☐
   Inter-incisor gap ☐ cm
   Able to protrude lower incisors beyond upper incisors? Yes ☐ No ☐
   Cervical spine abnormality Yes ☐ No ☐
   If Yes, please specify __________________________
   Other ☐
   If Other, please specify __________________________

Section 4: This Pregnancy

4.1 Final Estimated Date of Delivery (EDD)* ☐/☐/☐

4.2 Was this pregnancy a multiple pregnancy? Yes ☐ No ☐
   If Yes, please specify number of fetuses

4.3 Were there problems in this pregnancy?* Yes ☐ No ☐
   If Yes, please specify __________________________

Section 5: Delivery / Surgical / Anaesthetic intervention

5.1 Is this woman still undelivered? Yes ☐ No ☐
   If No, Did the woman labour?
   Was delivery by c-section? Yes ☐ No ☐
   If Yes, please state grade of urgency* ☐
   And give indication for c-section __________________________
   If Yes, what was the date of the anaesthetic when intubation failed? ☐/☐/☐
   Will she be delivered at your hospital?
   If No, please indicate name of delivery hospital __________________________

5.2 Was the anaesthetic when intubation failed, given for caesarean-section? Yes ☐ No ☐
   If No, for what surgical procedure was the general anaesthetic given? __________________________

*For guidance please see back cover
5.3 Please indicate which anaesthetists were present at any point during the procedure

<table>
<thead>
<tr>
<th>Grade</th>
<th>Years in training (trainee)</th>
<th>Locum</th>
<th>Present on induction of anaesthesia Y/N</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

5.4 Indication for general anaesthesia

- Urgency [ ]
- Patient refusal of regional [ ]
- Coagulation abnormality [ ]
- Failed or inadequate regional [ ]
- Other [ ]

If Other, please specify ____________________________________________________________

5.5 Was antacid prophylaxis against aspiration prescribed in the previous 6 hours (e.g. metoclopramide, H2 antagonist, proton pump inhibitor, sodium citrate)?

Yes [ ] No [ ]

*Please state drug, dose and time of administration. Continue in section 7 if necessary.*

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

5.6 Time of induction of general anaesthesia

5.7 Was cricoid pressure applied at induction?  Yes [ ] No [ ]

5.8 Was it released to assist airway insertion?  Yes [ ] No [ ]

5.9 Please list all drugs given for induction, with doses, in order. Include repeated doses. *(Continue in section 7 if necessary)*

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Intubation successful?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes [ ] No [ ]</td>
</tr>
</tbody>
</table>

5.10 Cormack-Lehane laryngoscopy grade* (Best view at the time intubation failure was declared)  

5.11 How many attempts at laryngoscopy were made? This is the number of times the laryngoscope was inserted into the mouth.

5.12 How many attempts at intubation were made? This is the number of times the tracheal tube was inserted into the mouth.

*For guidance please see back cover
5.13 Which tracheal tube size was used at the first attempt?

5.14 Was any other tube size attempted?  Yes ☐ No ☐

If Yes, which sizes?

5.15 Please state which of the following items of airway equipment were used, and in which order (mark 1,2,3 etc). In the second column please indicate if the item was unavailable.

<table>
<thead>
<tr>
<th>Order of Use</th>
<th>Unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>mark 1,2,3 etc</td>
<td>please tick if yes</td>
</tr>
<tr>
<td>Suction</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Nasopharyngeal airway</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Oropharyngeal airway</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Gum Elastic Bougie</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Laryngeal mask airway (LMA)</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Intubating LMA</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>ProSeal LMA</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Short handled Macintosh laryngoscope</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Long blade Macintosh laryngoscope</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>McCoy laryngoscope</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Polio Blade laryngoscope</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Fibreoptic bronchoscope</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Percutaneous cricothyroidotomy kit</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Other – please state below</td>
<td>☐ ☐</td>
</tr>
</tbody>
</table>

5.16 Was bag and mask ventilation commenced?  Yes ☐ No ☐

If Yes, did oxygenation improve?  Yes ☐ No ☐

5.17 Was capnography used during induction/maintenance of anaesthesia?  Yes ☐ No ☐

5.18 What was the oxygen saturation before pre-oxygenation?  %

5.19 What was the lowest recorded oxygen saturation after induction?  %

5.20 How was the failed intubation managed?

Surgery continued with alternative airway device  Yes ☐ No ☐

If Yes, please state which

Patient woken and surgery abandoned?  Yes ☐ No ☐

If Yes, how was the case subsequently managed?

General anaesthetic administered by another anaesthetist  Yes ☐ No ☐

If Yes, grade of anaesthetist

Regional technique?  Yes ☐ No ☐

Other  Yes ☐ No ☐

*For guidance please see back cover*
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 6: Outcomes</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Section 6a: Woman</strong></td>
<td></td>
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</tr>
<tr>
<td>6a.1 Was the woman admitted to ITU/HDU?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, duration of stay (days)</td>
<td></td>
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<tr>
<td>Or Tick if woman is still in ITU/HDU</td>
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<td></td>
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<tr>
<td>Or Tick if woman was transferred to another hospital</td>
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<tr>
<td>6a.2 Did the patient aspirate?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>6a.3 Did any other major maternal morbidity occur?**</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, please specify</td>
<td></td>
<td></td>
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<tr>
<td>6a.4 Did the woman die?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, please specify date of death</td>
<td></td>
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<tr>
<td>What was the primary cause of death as stated on the death certificate?</td>
<td></td>
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<tr>
<td><strong>Section 6b: Infant 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB: If more than one infant, for each additional infant, please photocopy</td>
<td></td>
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</tr>
<tr>
<td>the infant section of the form (before filling it in) and attach extra</td>
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<td></td>
</tr>
<tr>
<td>sheet(s) or download additional forms from the website:</td>
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<tr>
<td><a href="http://www.npeu.ox.ac.uk/ukoss">www.npeu.ox.ac.uk/ukoss</a></td>
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<tr>
<td>6b.1 Date and time of delivery</td>
<td></td>
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<tr>
<td>6b2 Mode of delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>spontaneous vaginal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ventouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lift-out forceps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rotational forceps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>breech</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre-labour caesarean section</td>
<td></td>
<td></td>
</tr>
<tr>
<td>caesarean section after onset of labour</td>
<td></td>
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<tr>
<td>6b.3 Birthweight</td>
<td></td>
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<tr>
<td>6b.4 Was the infant stillborn?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, was this Antepartum OR Intrapartum</td>
<td></td>
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<tr>
<td>Please go to section 7</td>
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<td></td>
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<tr>
<td>6b.5 5 min Apgar</td>
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</tbody>
</table>
Section 7
Please use this space to enter any other information you feel may be important

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Section 8:
Name of person completing the form

Designation

Today’s date

You may find it useful in the case of queries to keep a copy of this form.

*For guidance please see back cover
Definitions

1. **UK Census Coding for ethnic group**
   - **WHITE**
     - 01. British
     - 02. Irish
     - 03. Any other white background
   - **MIXED**
     - 04. White and black Caribbean
     - 05. White and black African
     - 06. White and Asian
     - 07. Any other mixed background
   - **ASIAN OR ASIAN BRITISH**
     - 08. Indian
     - 09. Pakistani
     - 10. Bangladeshi
     - 11. Any other Asian background
   - **BLACK OR BLACK BRITISH**
     - 12. Caribbean
     - 13. African
     - 14. Any other black background
   - **CHINESE OR OTHER ETHNIC GROUP**
     - 15. Chinese
     - 16. Any other ethnic group

2. **Previous or current pregnancy problems, including:**
   - Pre-eclampsia (hypertension and proteinuria)
   - Eclampsia
   - Thrombotic event
   - Amniotic fluid embolism
   - 3 or more miscarriages
   - Preterm birth or mid trimester loss
   - Neonatal death
   - Stillbirth
   - Baby with a major congenital abnormality
   - Small for gestational age (SGA) infant
   - Large for gestational age (LGA) infant
   - Infant requiring intensive care
   - Puerperal psychosis
   - Placenta praevia
   - Gestational diabetes
   - Significant placental abruption
   - Post-partum haemorrhage requiring transfusion

3. **Previous or pre-existing maternal medical problems, including:**
   - Essential hypertension
   - Cardiac disease (congenital or acquired)
   - Renal disease
   - Connective tissue disorders
   - Rheumatological disorders
   - Any congenital facial abnormalities or trauma
   - Endocrine disorders e.g. hypo or hyperthyroidism, acromegally
   - Psychiatric disorders
   - Haematological disorders e.g. sickle cell disease, diagnosed thrombophilia
   - Inflammatory disorders e.g. inflammatory bowel disease
   - Polycystic ovary syndrome
   - Epilepsy
   - Diabetes
   - Autoimmune diseases
   - Cancer / previous radiotherapy

4. **Mallampati classification**
   This classification describes the anatomical structures visualised with maximal mouth opening and tongue protrusion in the sitting position.
   - Class I: soft palate, fauces, uvula, pillars
   - Class II: soft palate, fauces, portion of uvula
   - Class III: soft palate, base of uvula
   - Class IV: hard palate only

5. **Estimated date of delivery (EDD):**
   Use the best estimate (ultrasound scan or date of last menstrual period) based on a 40 week gestation

6. **RCA/RCOG/CEMACH/CNST Classification for urgency of caesarean section:**
   - Immediate threat to life of woman or fetus
   - Maternal or fetal compromise which is not immediately life-threatening
   - Needing early delivery but no maternal or fetal compromise
   - At a time to suit the woman and maternity team

7. **Cormack and Lehane**
   This classification describes the best view possible at laryngoscopy.
   - Grade I: complete glottis visible
   - Grade II: anterior glottis not seen
   - Grade III: epiglottis seen, but not glottis
   - Grade IV: epiglottis not seen

8. **Major maternal medical complications, including:**
   - Persistent vegetative state
   - Cardiac arrest
   - Cerebrovascular accident
   - Adult respiratory distress syndrome
   - Disseminated intravascular coagulopathy
   - Pulmonary oedema
   - Mendleson’s syndrome
   - Renal failure
   - Thrombotic event
   - Septicaemia
   - Required ventilation

9. **Fetal/infant complications, including:**
   - Respiratory distress syndrome
   - Intraventricular haemorrhage
   - Necrotising enterocolitis
   - Neonatal encephalopathy
   - Chronic lung disease
   - Severe jaundice requiring phototherapy
   - Severe infection e.g. septicaemia, meningitis
   - Exchange transfusion