Maternal Pulmonary Aspiration in Pregnancy
Study 04/13

Data Collection Form - CASE

Please report any woman delivering on or after 01/09/2013 and before 01/09/15

Case Definition:

Please report any woman with a final diagnosis of pulmonary aspiration during pregnancy or delivery up to postpartum discharge from hospital.

Maternal pulmonary aspiration includes women with the following features

• Women who have had an unprotected airway while unconscious, semi-conscious or paralysed

AND

• A clinical history consistent with regurgitation of stomach contents and pulmonary aspiration (e.g. vomiting after induction of anaesthesia or gastric contents seen in the oropharynx)

AND

• Symptoms / signs of respiratory compromise requiring supplementary oxygen and antibiotics or level 2 or level 3 (HDU or ITU) respiratory support, in the absence of any other clear cause

Classical radiological findings may or may not be present

Please return the completed form to:

UKOSS
National Perinatal Epidemiology Unit
University of Oxford
Old Road Campus
Oxford
OX3 7LF
Fax: 01865 617775
Phone: 01865 289714

Case reported in: ____________________________
**Instructions**

1. Please do not enter any personally identifiable information (e.g. name, address or hospital number) on this form.
2. Please record the ID number from the front of this form against the woman’s name on the Clinician’s Section of the blue card retained in the UKOSS folder.
3. Fill in the form using the information available in the woman’s case notes.
4. Tick the boxes as appropriate. If you require any additional space to answer a question please use the space provided in section 7.
5. Please complete all dates in the format DD/MM/YY, and all times using the 24hr clock e.g. 18.37
6. If codes or examples are required, some lists (not exhaustive) are included on the back page of the form.
7. If the woman has not yet delivered, please complete the form as far as you are able, excluding delivery and outcome information, and return to the UKOSS Administrator. We will send these sections again for you to complete two weeks after the woman’s expected date of delivery.
8. If you do not know the answers to some questions, please indicate this in section 7.
9. If you encounter any problems with completing the form please contact the UKOSS Administrator or use the space in section 7 to describe the problem.

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**Section 1: Woman's details**

<table>
<thead>
<tr>
<th>1.1 Year of birth</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Ethnic group* (enter code, please see back cover for guidance)</td>
<td></td>
</tr>
<tr>
<td>1.3 Marital status</td>
<td>single □ married □ cohabiting □</td>
</tr>
<tr>
<td>1.4 Was the woman in paid employment at booking?</td>
<td></td>
</tr>
<tr>
<td>If Yes, what is her occupation</td>
<td></td>
</tr>
<tr>
<td>If No, what is her partner’s (if any) occupation</td>
<td></td>
</tr>
<tr>
<td>1.5 Height at booking</td>
<td>cm</td>
</tr>
<tr>
<td>1.6 Weight at booking</td>
<td>kg</td>
</tr>
<tr>
<td>1.7 Smoking status</td>
<td>never □ gave up prior to pregnancy □</td>
</tr>
<tr>
<td></td>
<td>current □ gave up during pregnancy □</td>
</tr>
</tbody>
</table>

**Section 2: Previous Obstetric History**

| 2.1 Gravidity |
| Number of completed pregnancies beyond 24 weeks |
| Number of pregnancies less than 24 weeks |
| If no previous pregnancies, please go to section 3. |
| 2.2 Did the woman have any problems in her previous pregnancies?* |
| If Yes, please specify |

**Section 3: Previous Medical History**

| 3.1 Did the woman have any of the following? |
| If Yes, please tick all that apply |
| Hiatus hernia □ Known history of aspiration □ |
| Known swallowing problems □ Gastro-oesophageal reflux disease (GORD) □ Epilepsy □ |
| 3.2 Does the woman have any respiratory illness, recurrent chest infections or other chest complaints? |
| If Yes, please specify |
| 3.3 Does the woman have any other pre-existing medical problems* |
| If Yes, please specify |

*For guidance please see back cover
Section 4: This Pregnancy

4.1 Final Estimated Date of Delivery (EDD)**

4.2 Was this pregnancy a multiple pregnancy?
   - Yes ☐ No ☐

   If Yes, specify number of fetuses

4.3 Were there any other problems in this pregnancy?**
   - Yes ☐ No ☐

   If Yes, please specify

4.4 What are the usual hospital guidelines for oral intake during active labour? (please tick one for high risk and one for low risk women)

<table>
<thead>
<tr>
<th></th>
<th>High risk</th>
<th>Low risk</th>
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<tbody>
<tr>
<td>Restricted intake</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Light diet</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

4.5 Does the hospital have a fasting policy prior to elective surgery?
   - Yes ☐ No ☐

   If Yes, for how many hours are women recommended to fast prior to surgery?

Section 5: Diagnosis and Delivery
Section 5a: Diagnosis of Aspiration

5a.1 What was the date and time the woman was admitted prior to the aspiration event?

5a.2 What was the date and time that aspiration was diagnosed?

5a.3 Where was the woman when the aspiration occurred? (tick one only)
   - Home / community ☐ Delivery room ☐ Labour ward anaesthetic room ☐ Labour ward theatre ☐ Labour ward recovery area ☐ Labour ward high dependency area ☐ Elsewhere in the hospital ☐

5a.4 Which of the following features were noted prior to or immediately following the presumed aspiration event: (tick all that apply)
   - Vomiting ☐
   - Gastric contents seen in oropharynx ☐
   - Gastric contents seen on pillow ☐
   - Low oxygen saturation ☐
   - Unprotected airway at induction/intubation for general anaesthesia ☐
   - Unprotected airway at extubation following general anaesthesia ☐
   - Unprotected airway while semi-conscious ☐

   If ticked, please specify circumstances (e.g. in recovery after anaesthesia, following epileptic or eclamptic fit):

5a.5 Was a chest X-ray done?
   - Yes ☐ No ☐

   If Yes, was consolidation noted?
   - Yes ☐ No ☐

   Were any other abnormalities noted?
   - Yes ☐ No ☐

   If Yes, please specify

*For guidance please see back cover
5a.6 Was any other cause for the symptoms and signs identified?  
Yes ☐ No ☐  
If Yes, please specify ________________________________

5a.7 Did the woman have any oral intake in the 6 hours prior to the aspiration event?  
Yes ☐ No ☐ Not known ☐  
If Yes, please record what was eaten/drunk (tick one only)  
Food and fluids ☐ Fluids only ☐ Clear fluids only ☐

Was the date and time of the last oral intake known?  
Yes ☐ No ☐

If Yes, please give date and time of last known oral intake  
DD/MM/YYYY hh:mm

5a.8 Was antacid prophylaxis against aspiration prescribed in the 6 hours prior to aspiration?  
Yes ☐ No ☐

(e.g. metoclopramide, H2 antagonist, proton pump inhibitor, sodium citrate)  
If Yes, please state:

<table>
<thead>
<tr>
<th>Drug(s) name</th>
<th>Dose</th>
<th>Units</th>
<th>Date and time of administration</th>
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</tbody>
</table>

5a.9 Did the woman receive any opioids in the 6 hours prior to aspiration?  
Yes ☐ No ☐

(e.g. morphine, pethidine)  
If Yes, please state:

<table>
<thead>
<tr>
<th>Drug(s) name</th>
<th>Dose</th>
<th>Units</th>
<th>Date and time of administration</th>
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Section 5b: Aspiration Associated with General Anaesthesia

5b.1 Was the aspiration event associated with general anaesthesia?  
Yes ☐ No ☐

If No, please go to section 5c.  
If Yes, please continue

5b.2 Did a consultant anaesthetist administer the anaesthetic?  
Yes ☐ No ☐

If No, what was the grade of the anaesthetist administering the anaesthetic?  
__________________________

Was a consultant anaesthetist present?  
Yes ☐ No ☐

5b.3 Was an airway device in use at the time of aspiration?  
Yes ☐ No ☐

If Yes, please specify (tick one only)  
Face mask ☐ Oropharyngeal airway ☐ Classic laryngeal mask airway ☐

Other supraglottic airway device ☐ (please specify with trade name) __________________________

Endotracheal tube with cuff inflated ☐ Endotracheal tube with cuff NOT inflated ☐

Other ☐ (please specify) __________________________
### Section 5b: Anaesthesia

5b.4 Was the anaesthetic associated with the aspiration given for caesarean section?  
Yes ☐  No ☐  
If No, for what procedure was anaesthesia given?  

5b.5 Were any of the following mechanisms used to reduce the aspiration risk before, during or after anaesthesia?  
Yes ☐  No ☐  
If Yes, *tick all that apply*  
- Nasogastric or orogastric tube insertion and stomach drainage ☐  
- Rapid sequence induction ☐  
- Application of cricoid pressure during induction ☐  
- Release of cricoid pressure to assist airway insertion ☐  
- Extubation in the left lateral position ☐  
- Extubation when awake ☐

### Section 5c: Management of Aspiration

5c.1 Following aspiration, were any of the following performed?  
Yes ☐  No ☐  
If Yes, *tick all that apply*  
- Intubation ☐  
- Bronchoscopy ☐  
- Cricoid pressure ☐  
- Oropharyngeal suction ☐  
- Patient placed in left-lateral, head-down position ☐  
- Supplemental oxygen ☐

5c.2 Were antibiotics given?  
Yes ☐  No ☐  
If Yes, please state:

<table>
<thead>
<tr>
<th>Drug(s) name</th>
<th>Dose</th>
<th>Units</th>
<th>Route</th>
<th>Duration (days)</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

5c.3 Were any steroid or bronchodilator drugs given?  
Yes ☐  No ☐  
If Yes, please state:

<table>
<thead>
<tr>
<th>Drug(s) name</th>
<th>Dose</th>
<th>Units</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

### Section 5d: Delivery

5d.1 Did this woman have a miscarriage?  
Yes ☐  No ☐  
If Yes, please specify date  
DD/MM/YYYY

5d.2 Did this woman have a termination of pregnancy?  
Yes ☐  No ☐  
If Yes, please specify date  
DD/MM/YYYY

*For guidance please see back cover*
Section 6: Outcomes
Section 6a: Woman

6a.1 Was the woman admitted to HDU (critical care level 2)?
Yes [ ] No [ ]
If Yes, please specify:
Duration of stay [ ] days
Or Tick if woman is still in HDU (critical care level 2)
Or Tick if woman was transferred to another hospital

6a.2 Was the woman admitted to ITU (critical care level 3)?
Yes [ ] No [ ]
If Yes, please specify:
Duration of stay [ ] days
Or Tick if woman is still in ITU (critical care level 3)
Or Tick if woman was transferred to another hospital

6a.3 Did the woman require mechanical ventilation after the aspiration?
Yes [ ] No [ ]

6a.4 Did the woman require extracorporeal membrane oxygenation (ECMO)?
Yes [ ] No [ ]

6a.5 Did the woman have a cardiorespiratory arrest?
Yes [ ] No [ ]
If Yes, please give date and time of arrest
DD/MM/YYYY HH:MM

6a.6 Did any other major maternal morbidity occur? Yes [ ] No [ ]
If Yes, please specify ________________________________

6a.7 Was the woman discharged following the admission in which she had the aspiration event?
Yes [ ] No [ ]
If Yes, please give date of discharge
DD/MM/YYYY

6a.8 Did the woman die?
Yes [ ] No [ ]
If Yes, please specify date and time of death
DD/MM/YYYY HH:MM
What was the primary cause of death as stated on the death certificate?
(Please state if not known) ________________________________

Was a post mortem examination undertaken?
Yes [ ] No [ ]
If Yes, did the examination confirm the cause of death?
Yes [ ] No [ ] Not known [ ]

*For guidance please see back cover
<table>
<thead>
<tr>
<th>Section 6b: Infant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NB:</strong> If more than one infant, for each additional infant, please photocopy the infant section of the form (before filling it in) and attach extra sheet(s) or download additional forms from the website: <a href="http://www.npeu.ox.ac.uk/ukoss">www.npeu.ox.ac.uk/ukoss</a></td>
</tr>
<tr>
<td><strong>6b.1</strong> Date and time of delivery</td>
</tr>
<tr>
<td><strong>6b.2</strong> Mode of delivery</td>
</tr>
<tr>
<td>Spontaneous vaginal</td>
</tr>
<tr>
<td><strong>6b.3</strong> Birthweight</td>
</tr>
<tr>
<td><strong>6b.4</strong> Sex of infant</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td><strong>6b.5</strong> Was the infant stillborn?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>If Yes, was this?</td>
</tr>
<tr>
<td>Ante-partum</td>
</tr>
<tr>
<td>If Yes, go to section 7</td>
</tr>
<tr>
<td><strong>6b.6</strong> Did the infant require resuscitation at birth?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td><strong>6b.7</strong> 5 min Apgar</td>
</tr>
<tr>
<td><strong>6b.8</strong> Was the infant admitted to the neonatal unit?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td><strong>6b.9</strong> Did any major infant complications occur?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>If Yes, please specify</td>
</tr>
<tr>
<td><strong>6b.10</strong> Did this infant die?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>If Yes, please specify date and time of death</td>
</tr>
<tr>
<td>What was the primary cause of death as stated on the death certificate?</td>
</tr>
<tr>
<td>(Please state if not known)</td>
</tr>
</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:
- Hospital admissions during the pregnancy, either related to the pregnancy or not related
  - Thrombotic event (PE/ DVT)
  - Amniotic fluid embolism
  - Pre-eclampsia
  - Eclampsia
  - 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:
- Cardiac disease (congenital or acquired)
- Renal disease
- Endocrine disorders e.g. hypo or hyperthyroidism, diabetes
- Psychiatric disorders
- Haematological disorders e.g. sickle cell disease, diagnosed thrombophilia
- Inflammatory disorders e.g. inflammatory bowel disease
- Autoimmune diseases
- Cancer
- HIV
- Immunosuppressive disorders

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

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

#### 6. Major maternal morbidity, including:
- Persistent vegetative state
- Cardiac arrest
- Cerebrovascular accident
- Adult respiratory distress syndrome
- Disseminated intravascular coagulopathy
- HELLP
  - Pulmonary oedema
  - Mendelson’s syndrome
  - Renal failure
  - Thrombotic event
  - Septicaemia
  - Required ventilation

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

Version 1, September 2013