Severe Maternal Sepsis
Study 03/11
Data Collection Form - CASE

Please report any woman delivering on or after 1st June 2011 and before 1st June 2013.

Case Definition:

Any pregnant or recently pregnant woman (up to 6 weeks postpartum) diagnosed with severe sepsis (irrespective of the source of infection). Report only cases diagnosed as having severe sepsis by a senior clinician.

A severe sepsis case would be expected to include women in one of the following groups:

1. Death related to infection or suspected infection
2. Any women requiring level 2 or level 3 critical care (or obstetric HDU type care) due to severe sepsis or suspected severe sepsis
3. A clinical diagnosis of severe sepsis

As a guide, clinical diagnosis of severe sepsis would usually be associated with 2 or more of the following:

a. Temperature >38°C or <36°C measured on 2 occasions at least 4 hours apart
b. Heart rate >100 beats/ minute measured on 2 occasions at least 4 hours apart
c. Respiratory rate >20/ minute measured on 2 occasions at least 4 hours apart
d. White cell count >17x10⁹/L or <4x10⁹/L or with >10% immature band forms, measured on 2 occasions
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.

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 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 previous pregnancy problems?* □ Yes □ No
   If Yes, please specify: ________________________________
2.3 Did the woman have any previous Caesarean sections? □ Yes □ No
   If Yes, how many?

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

3.1 Does the woman have a history of recurrent infections?  
Yes ☐ No ☐
If Yes, please specify: ____________________________

3.2 Was the woman immuno-compromised (including taking immuno-suppressants)?  
Yes ☐ No ☐
If Yes, please specify cause: ____________________________

3.3 Does the woman have (or have a history of) diabetes?  
Yes ☐ No ☐

3.4 Does the woman have a history of a sexually transmitted infection?  
Yes ☐ No ☐
If Yes, please give details: ____________________________

3.5 Does the woman have any other previous or pre-existing medical problems?  
Yes ☐ No ☐
If Yes, please specify: ____________________________

3.6 Does the woman or any household member have a recent history (two weeks prior to presentation) of any of the following?

<table>
<thead>
<tr>
<th></th>
<th>Woman</th>
<th>Household member</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sore throat</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Respiratory infection</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Vomiting</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Flu-like illness</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sustained abdominal pain</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Mastitis (&gt;48 hrs duration)</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Section 4: This Pregnancy - Antenatal Information

4.1 Final Estimated Date of Delivery (EDD)  
/ / D M Y YMD

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

4.3 Date of booking:  
/ / D M Y YMD

4.4 Did the woman have any invasive antenatal procedures, eg CVS, amniocentesis?  
Yes ☐ No ☐
If Yes, please specify: ____________________________

4.5 Was the woman prescribed antibiotics in the two weeks prior to her severe sepsis?  
Yes ☐ No ☐
If Yes: What antibiotics were taken? ____________________________
What was the indication? ____________________________

4.6 Were there any other problems in this pregnancy?  
Yes ☐ No ☐
If Yes, please specify: ____________________________

*For guidance please see back cover
### Section 5: Delivery and Diagnosis of Sepsis

#### Section 5a: Delivery

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5a.1 Did the woman have a miscarriage?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes, please specify date:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5a.2 Did the woman have a termination of pregnancy?</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, please specify date:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*If Yes to 5a.1 or 5a.2, please now complete sections 5b, 6a, 7 and 8*

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5a.3 Is the woman still undelivered?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes, will she be receiving the rest of her antenatal care from your hospital?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If No, please indicate name of hospital providing future care:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will she be delivered at your hospital?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If No, please indicate name of delivery hospital, then go to Section 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5a.4 Was delivery induced?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes, please state indication:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was vaginal prostaglandin used?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5a.5 What was the date and time of membrane rupture?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5a.6 Did the woman labour?</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, what was the date and time labour was diagnosed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many vaginal examinations were documented?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was fetal blood sampling performed?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Was a fetal scalp electrode used?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Were there any complications of vaginal delivery (e.g. episiotomy, 2nd, 3rd or 4th degree tear)?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, please specify:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the woman undergo a manual removal of placenta?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5a.8 Was delivery by caesarean section?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes, please state:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade of urgency:<em>6</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indication for caesarean section:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of anaesthesia:</td>
<td>Regional</td>
<td>General anaesthetic</td>
</tr>
<tr>
<td>Were prophylactic antibiotics given?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, please give names of antibiotics given:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were there any complications during the surgery?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If Yes, please specify:</td>
<td></td>
<td></td>
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</tbody>
</table>

*For guidance please see back cover*
**Section 5b: Diagnosis and Management of Sepsis**

5b.1 What was the date and time of severe sepsis diagnosis?  

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
</table>

5b.2 Where was the woman when sepsis was first suspected?  
Hospital | Home

5b.3 Did the woman have any of the following:  

<table>
<thead>
<tr>
<th>Condition</th>
<th>Yes</th>
<th>No</th>
<th>Not done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature &gt;38°C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature &lt;36°C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate &gt;100 beats/minute</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory rate &gt;20/minute</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>White cell count &gt;17 x10^9/L</td>
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<tr>
<td>White cell count &lt;4 x10^9/L</td>
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<tr>
<td>White cell immature band forms &gt;10%</td>
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</tbody>
</table>
Section 6: Outcomes

Section 6a: Woman

6a.1 Was the woman admitted to HDU (including obstetric HDU) or level 2 care?  
Yes □ No □  
If Yes, duration of stay: □□□□ days  
OR Tick if woman is still in HDU or level 2 care: □□□□  
OR Tick if woman was transferred to another hospital: □□□□

6a.2 Was the woman admitted to ITU or level 3 care?  
Yes □ No □  
If Yes, duration of stay: □□□□ days  
OR Tick if woman is still in ITU or level 3 care: □□□□  
OR Tick if woman was transferred to another hospital: □□□□

6a.3 Did any other major maternal morbidity occur?*  
Yes □ No □  
If Yes, please specify: ________________________________________

6a.4 Has the woman been discharged from hospital after her episode of sepsis? Yes □ No □  
If Yes, what was the date of the woman’s final discharge from hospital? □□□□/□□□□/□□

6a.5 Did the woman die?  
Yes □ No □  
If Yes, please specify date and time of death □□□□/□□□□/□□:□□

What was the primary cause of death as stated on the death certificate?  
(Please state if not known.) ________________________________________

5b.4 Was there laboratory confirmed infection?  
Yes □ No □  
If Yes: What was the source of the sample (e.g. blood, urine, etc.)? ____________________________  
Date of first positive sample: □□□□/□□□□/□□  
Organism identified: _________________________________________________________________

5b.5 What was the primary source of the infection which caused the sepsis?  
__________________________________________________________________________

5b.6 Was septic shock diagnosed?  
Yes □ No □  
If Yes, what was the date of diagnosis? □□□□/□□□□/□□

5b.7 Please record the following or tick if not measured  
Lowest systolic BP □□□□ mmHg OR Not measured □□□□  
Highest lactate □□□□ mmol/L OR Not measured □□□□  
Greatest base deficit □□□□ OR Not measured □□□□  
Lowest pH □□□□ OR Not measured □□□□

5b.8 Were antibiotics administered for severe sepsis?  
Yes □ No □  
If Yes, please list in table below (Continue in section 7 if necessary).

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Route</th>
<th>Date started</th>
<th>Date stopped</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>□□□□/□□□□/□□</td>
<td>□□□□/□□□□/□□</td>
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</tbody>
</table>

*For guidance please see back cover
Section 6b: Infant 1

NB: 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: www.npeu.ox.ac.uk/ukoss

6b.1 Date and time of delivery: / / D M Y YMD

6b.2 Mode of delivery:
- Spontaneous vaginal
- Ventouse
- Lift-out forceps
- Rotational forceps
- Breech
- Pre-labour caesarean section
- Caesarean section after onset of labour

6b.3 Birthweight: g

6b.4 Sex of infant: Male Female Indeterminate

6b.5 Was the infant stillborn? Yes No
   If Yes, please go to section 7.

6b.6 5 min Apgar:

6b.7 Was the infant admitted to the neonatal unit? Yes No

6b.8 Was the infant septic? Yes No

6b.9 Did any other major infant complications occur? Yes No
   If Yes, please specify: ________________________________

6b.10 Did this infant die? Yes No
   If Yes, please specify date and time of death / / D M Y YMD:
   What was the primary cause of death as stated on the death certificate? (Please state if not known) ________________________________

Section 7:

Please use this space to enter any other information you feel may be important

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Section 8:

8.1 Name of person completing the form: ________________________________

8.2 Designation: ________________________________

8.3 Today’s date: / / D M Y YMD

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:

Thrombotic event
Amniotic fluid embolism
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
Surgical procedure in pregnancy
Hyperemesis requiring admission
Dehydration requiring admission
Ovarian hyperstimulation syndrome
Severe infection e.g. pyelonephritis
Rh(D) alloimmunisation

3. Previous history of sexually transmitted infection, including:

HIV
Syphilis
Gonorrhoea

Chlamydia
Genital herpes
Hepatitis C

4. Previous or pre-existing maternal medical problems, including:

Diabetes
Cardiac disease (congenital or acquired)
Renal disease
Endocrine disorders e.g. hypo or hyperthyroidism
Psychiatric disorders
Haematological disorders e.g. sickle cell disease, diagnosed thrombophilia, anaemia
Inflammatory disorders e.g. inflammatory bowel disease
Autoimmune diseases
Cancer
Depression

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:

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

7. Major maternal medical complications, 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
Required ventilation

8. 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