ID Number:

UKOSS

UK Obstetric Surveillance System

High Neuraxial Block
Study 02/17
FORM D

Data Collection Form - CASE

Please report any pregnant woman delivering between 01/09/2017 and 31/08/2019

Case Definition:

Any pregnant woman who develops a high block in association with spinal and or epidural anaesthesia /analgesia that requires ventilatory support* and /or cardiopulmonary resuscitation.**

***Ventilatory support includes the additional use of 'bag/mask' ventilation, or ventilation assisted by the use of a supraglottic airway device or endotracheal tube.**

****Cardiopulmonary resuscitation includes the use of basic and advanced life support.**

You have been sent High Neuraxial Block Form D

You have been allocated Form D because you answered the email questionnaire *'What was the very last anaesthetic intervention that directly resulted in the high neuraxial block?'* as

Top up of epidural/Top up of epidural component of CSE after resited epidural catheter

If this is NOT correct DO NOT complete this form.

Please contact the UKOSS Office at ukoss@npeu.ox.ac.uk
as you will require a different form.

Royal College of Obstetricians and Gynaecologists

Bringing to life the best in women's health care

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: _____

npeu National Perinatal Epidemiology Unit

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 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 10.
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 10.
9. If you encounter any problems with completing the form please contact the UKOSS Administrator or use the space in section 10 to describe the problem.

Section 1: Woman's details

1.1 **Year of birth** Y Y Y Y

1.2 **Ethnic group**[1]* *(enter code, please see back cover for guidance)*

1.3 **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 _____

1.4 **Height at booking** ☐☐☐ cm

1.5 **Weight at booking** ☐☐☐.☐ kg

1.6 **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?**[2]* Yes ☐ No ☐

If Yes, please specify _____

Section 3: Previous Medical History

3.1 **Please indicate whether any of the following were present:** *(Please tick all that apply)*

Previous spinal surgery ☐ Spinal scoliosis ☐ Spinal kyphosis ☐

Spinal canal stenosis ☐ Spina bifida ☐ Other ☐

If Other, please give details _____

3.2 **Did this woman have any other previous or pre-existing medical problems?**[3]* Yes ☐ No ☐

If Yes, please give details _____

Section 4: This Pregnancy

4.1 **Final Estimated Date of Delivery (EDD)**[4]* D D / M M / Y Y

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

If Yes, specify number of fetuses ☐

4.3 **Were there any other problems in this pregnancy except for High Neuraxial Block?**[2]* **Yes** ☐ **No** ☐

If Yes, please specify _____

*For guidance please see back cover

Section 5:

Section 5a: Anaesthetic Intervention

5a.1 What was the initial indication for the primary (first) neuraxial procedure? *(Pleasetick one only)*

Labour analgesia ☐ Category 1 Caesarean Section ☐ Category 2 Caesarean Section ☐

Category 3 Caesarean Section ☐ Category 4 Caesarean Section ☐

Instrumental Delivery ☐ Retained products ☐ Tear repair ☐ Other ☐

If Other, please give details _____

5a.2 When was the primary neuraxial procedure performed? D D / M M / Y Y h h : m m (24hr)

5a.3 Was the primary neuraxial procedure an epidural, SSS or CSE?

Epidural ☐ SSS ☐ CSE ☐

If Epidural, please answer Q5a.4 **If CSE,** please answer Q.5a.5 **If SSS,** please answer Q.5a.6

5a.4 If Epidural,

i). **How many attempts were there to locate the epidural space (successful and unsuccessful)?** Successful ☐ Unsuccessful ☐

ii). **Was loss of resistance determined using saline or air?** Saline ☐ Air ☐

iii). **Was there a recognised dural tap with the Tuohy needle?** Yes ☐ No ☐

5a.5 If CSE,

i). **How many attempts were there to locate the epidural space (successful and unsuccessful)?** Successful ☐ Unsuccessful ☐

ii). **Was loss of resistance determined using saline or air?** Saline ☐ Air ☐

iii). **Was there a recognised dural tap with the Tuohy needle?** Yes ☐ No ☐

iv). **How many attempts were there to puncture the dura with the spinal needle?** ☐☐

5a.6 If SSS,

i). **How many attempts were there to puncture the dura with the spinal needle?** ☐☐

Section 5d: High neuraxial block following epidural top-up or top up of epidural component of CSE after previously resited epidural catheter

5d.1 What drugs were used for initial set up of the primary neuraxial block?

Agent	Route (Epidural or Spinal)

5d.2 What was the routine method of epidural maintenance?

Midwife led syringe boluses ☐ Patient controlled epidural analgesia via pump ☐

Midwife controlled epidural analgesia via pump ☐ Other (e.g. infusion) ☐

If Other, please give details _____

*For guidance please see back cover

5d.3 Were any epidural drugs given *prior* to the resite? Yes ☐ No ☐

If Yes, what was the first agent used after the initial set up of the primary neuraxial block (e.g. 0.1% bupivacaine with 25 mcg fentanyl)?

_____

How many top-ups of this agent were given (e.g. 2x5ml, 4x10ml)? _____

Over what duration (e.g. 5 hours)? _____

Were any other agents used ***prior*** to the resite? Yes ☐ No ☐

If Yes, what agent and dose/concentration volume was given e.g. 20 mls

0.5% L- Bupivacaine _____

5d.4 Why was the epidural catheter resited?

Catheter never worked at any time ☐ Unilateral block ☐ Patchy block ☐ Catheter fell out ☐

Suspected intrathecal catheter ☐ Suspected intravenous catheter ☐ Other ☐

If Other, please give details _____

5d.5 What was the initial indication for the resite?

Labour analgesia ☐ Category 1 Caesarean Section ☐ Category 2 Caesarean Section ☐

Category 3 Caesarean Section ☐ Category 4 Caesarean Section ☐

Instrumental Delivery ☐ Retained products ☐ Tear repair ☐ Other ☐

If Other, please give details _____

5d.6 When was the resite performed? D D / M M / Y Y h h : m m (24hr)

5d.7 Was the resite an epidural or CSE? Epidural ☐ CSE ☐

If Epidural,

i). **How many attempts were there to locate the epidural space (successful and unsuccessful)?** Successful ☐ Unsuccessful ☐

ii). **Was loss of resistance determined using saline or air?** Saline ☐ Air ☐

iii). **Was there a recognised dural tap with the Tuohy needle?** Yes ☐ No ☐

If CSE,

iv). **How many attempts were there to locate the epidural space (successful and unsuccessful)?** Successful ☐ Unsuccessful ☐

v). **Was loss of resistance determined using saline or air?** Saline ☐ Air ☐

vi). **Was there a recognised dural tap with the Tuohy needle?** Yes ☐ No ☐

i). **How many attempts were there to puncture the dura with the spinal needle?** ☐☐

5d.8 What drugs were used for initial set up of the resite?

Agent	Route (Epidural or Spinal)

5d.9 What was the method of epidural maintenance after the resite?

Midwife led syringe boluses ☐ Patient controlled epidural analgesia via pump ☐

Midwife controlled epidural analgesia via pump ☐ Anaesthetist led ☐ Other (e.g. infusion) ☐

If Other, please give details _____

5d.10 Were any epidural top-up drugs given prior to the top-up that led to high neuraxial block? Yes ☐ No ☐

If Yes, what was the first agent used (e.g. 0.1% bupivacaine with 25 mcg fentanyl)?

How many top-ups of this agent were given (e.g. 2x5ml, 4x10ml)?

Over what duration (e.g. 5 hours)?

Were any other agents used prior to the top-up that led to the high neuraxial block? Yes ☐ No ☐

If Yes, what agent and dose/concentration/volume was given e.g. 20 mls 0.25% L- Bupivacaine

5d.11 Concerning the top-up that lead directly to the high neuraxial block what was the indication for the top-up?

Labour analgesia ☐ Category 1 Caesarean Section ☐ Category 2 Caesarean Section ☐
Category 3 Caesarean Section ☐ Category 4 Caesarean Section ☐
Instrumental Delivery ☐ Retained products ☐ Tear repair ☐ Other ☐

If Other, please give details _____

5d.12 Concerning the top-up that lead directly to the high neuraxial block, who gave this top-up?

Midwife led syringe boluses ☐ Patient controlled epidural analgesia via pump ☐
Midwife controlled epidural analgesia via pump ☐ Anaesthetist led ☐ Other (e.g. infusion) ☐

If Other, please give details _____

5d.13 For this top-up that resulted in the high neuraxial block, when was the dose given

D D / M M / Y Y h h : m m (24hr)

5d.13ii What agent and dose/concentration/volume was given e.g. 20 mls 0.5% L-Bupivacaine _____

5d.14 Was the epidural catheter subsequently found to be Intrathecal?

Yes ☐ No ☐ Don't know ☐

Section 6: Diagnosis of High Neuraxial Block

6.1 What was the date and time when symptoms/signs of a high neuraxial block were first detected?

D D / M M / Y Y h h : m m (24hr)

6.2 What was the date and time when the high neuraxial block was first diagnosed?

D D / M M / Y Y h h : m m (24hr)

6.3 Where was the woman when the high neuraxial block occurred?

Labour room ☐ In transit to operating theatre ☐ Operating theatre ☐
In recovery ☐ Other ☐

If Other, please give details _____

6.4 What was the first symptom that suggested the diagnosis of a high neuraxial block? *(Please tick one only)*

Anxiety ☐ Nausea ☐ Vomiting ☐ Increased lower limb motor block ☐

Arm dysaesthesia / paraesthesia / paralysis ☐ Hand dysaesthesia / paraesthesia / paralysis ☐

Shortness of breath ☐ Difficulty speaking ☐ Difficulty coughing ☐

Decreased conscious level ☐ Loss of consciousness ☐ Other ☐

If Other, please give details _____

6.5 What other symptoms subsequently occurred that suggested the diagnosis of a high neuraxial block? *(Please tick all that apply)*

Anxiety ☐ Nausea ☐ Vomiting ☐ Increased lower limb motor block ☐

Arm dysaesthesia / paraesthesia / paralysis ☐ Hand dysaesthesia / paraesthesia / paralysis ☐

Shortness of breath ☐ Difficulty speaking ☐ Difficulty coughing ☐

Decreased conscious level ☐ Loss of consciousness ☐ Other ☐

If Other, please give details _____

6.6 What was the first sign that suggested the diagnosis of a high neuraxial block? *(Please tick one only)*

Hypotension ☐ Tachycardia ☐ Bradycardia ☐ Decreasing oxygen saturations ☐

Cranial nerve involvement ☐ Fetal heart rate changes ☐ Other ☐

If Other, please give details _____

6.7 What other signs subsequently occurred that suggested the diagnosis of a high neuraxial block? *(Please tick all that apply)*

Hypotension ☐ Tachycardia ☐ Bradycardia ☐ Decreasing oxygen saturations ☐

Cranial nerve involvement ☐ Fetal heart rate changes ☐ Other ☐

If Other, please give details _____

6.8 Did the woman have a respiratory arrest? Yes ☐ No ☐

If Yes, please state date and time D D / M M / Y Y h h : m m (24hr)

6.9 Did the woman have a cardiorespiratory arrest? Yes ☐ No ☐

If Yes, please state date and time D D / M M / Y Y h h : m m (24hr)

i). Were chest compressions started? Yes ☐ No ☐

If Yes, for how long were they continued? _____

ii). What was the original rhythm at arrest?

Shockable eg VF/ pulseless VT ☐ Non-shockable eg PEA or Asystole ☐ Unknown ☐

iii). How many shocks were given? ☐

iv). Was spontaneous circulation restored? Yes ☐ No ☐

v). How long was the patient in cardiorespiratory arrest? _____

vi). What agents were used to provide anaesthesia or avoid awareness?

Name of drug	Date given	Time given	Dose and units	Route
	D D / M M / Y Y	h h : m m (24hr)		
	D D / M M / Y Y	h h : m m (24hr)		
	D D / M M / Y Y	h h : m m (24hr)		

Section 7: Management of high neuraxial block

7.1 What airway support did the woman require?

Bag-mask-valve ventilation only ☐

If Yes, for how long was this required? _____

Laryngeal mask airway ☐

If Yes, for how long was this required?

Endotracheal intubation ☐

If Yes, for how long was this required? _____

7.2 Please list all drugs given to secure the airway, with doses, in order. Include repeated doses.

Name of drug	Date given	Time given	Dose and units	Route
	D D / M M / Y Y	h h : m m		
	D D / M M / Y Y	h h : m m		
	D D / M M / Y Y	h h : m m		

7.3 Were there any difficulties securing the airway? Yes ☐ No ☐

If Yes, please give details _____

7.4 In the immediate management of high neuraxial block what fluids did the woman receive from the time of diagnosis to return of cardiovascular stability?

Fluid	Volume	Rate

7.5 Did the woman receive any drugs to treat bradycardia, tachycardia or hypotension? Yes ☐ No ☐

If Yes, please list any drugs given

Name of drug	Dose and units	Route	Date given	Time given
			D D / M M / Y Y	h h : m m
			D D / M M / Y Y	h h : m m
			D D / M M / Y Y	h h : m m

Section 8: Outcomes
Section 8a: Woman

8a.1 Was the woman admitted to ITU (critical care level 3)? Yes ☐ No ☐

If Yes, please specify:

Duration of stay ☐☐ days

What was the duration of ventilation (days)? ☐☐ days

What was the duration of inotropic support (days)? ☐☐ days

Is the woman still in ITU (critical care level 3)? Yes ☐ No ☐

Was the woman transferred to another hospital Yes ☐ No ☐

8a.2 Did any other major maternal morbidity occur?[6]* Yes ☐ No ☐

If Yes, please specify _____

8a.3 Did the woman die? Yes ☐ No ☐

If Yes, please specify date of death D D / M M / Y Y

What was the primary cause of death as stated on the death certificate?

(Please state if not known) _____

Section 8b: Infant

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

8b.1 Date and time of delivery D D / M M / Y Y h h : m m (24hr)

8b.2 Prior to the high neuraxial block what was the intended mode of delivery

Spontaneous vaginal ☐ Ventouse ☐ Forceps ☐

Pre-labour caesarean section ☐ Caesarean section after onset of labour ☐

8b.3 Was the delivery expedited because of the high neuraxial block Yes ☐ No ☐

If Yes, what was the time from decision to delivery? h h : m m (24hr)

Was the delivery carried out to aid maternal resuscitation or to aid fetal resuscitation

Maternal resuscitation ☐ Fetal resuscitation ☐ Both ☐ Unknown ☐

8b.4 What was the actual mode of delivery?

Spontaneous vaginal ☐ Ventouse ☐ Forceps ☐

Pre-labour caesarean section ☐ Caesarean section after onset of labour ☐

8b.5 Where was the baby delivered? Delivery room ☐ Theatre ☐ Other ☐

If Other, please give details _____

8b.6 Birthweight ☐☐☐☐ g

8b.7 Sex of infant Male ☐ Female ☐ Indeterminate ☐

8b.8 Was the infant stillborn? Yes ☐ No ☐

If Yes, was the death ante-partum or intra-partum? Ante-partum ☐ Intra-partum ☐

8b.9 Apgar ☐☐

*For guidance please see back cover

8b.10 Did the infant have cord gases recorded? Yes ☐ No ☐

If Yes, please complete table

Date	Time	Result
D D / M M / Y Y	h h m m	
D D / M M / Y Y	h h : m m (24hr)	
D D / M M / Y Y	h h m m	

8b.11 Was the infant admitted to the neonatal unit? Yes ☐ No ☐

8b.12 Did any major infant complications occur?[7*] Yes ☐ No ☐

If Yes, please specify _____

8b.13 Did this infant die? Yes ☐ No ☐

If Yes, please specify date of death D D / M M / Y Y

What was the primary cause of death as stated on the death certificate?

(Please state if not known) _____

Section 9:

Please use this space to enter any other information you feel may be important, for example any particular anaesthetic morbidity such as awareness, PDPH, or other complications etc.

Section 10:

Name of person completing the form _____

Designation _____

Today's date D D / M M / Y Y

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

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

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

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
Inflammatory disorders e.g. inflammatory bowel disease
Autoimmune diseases
Cancer
HIV

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
Mendleson'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