

UK Obstetric Surveillance System

Myocardial Infarction Study 07/05

Data Collection Form - CASE

Case Definition:

All women in the UK identified as having myocardial infarction during pregnancy or immediately postpartum (before hospital discharge following delivery) after 01/08/2005. Myocardial infarction is defined using the joint European Society of Cardiology/American College of Cardiology criteria:

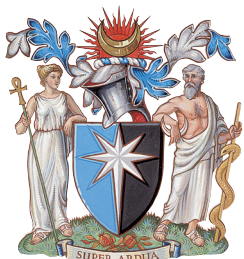
EITHER A typical rise and gradual fall (troponin) or more rapid rise and fall (CK-MB) of biochemical markers of myocardial necrosis with at least one of the following: (a) ischaemic symptoms, (b) development of pathologic Q waves on the ECG, (c) ECG changes indicative of ischaemia (ST segment elevation or depression), or (d) coronary artery intervention (e.g. coronary angioplasty)

OR Pathological findings of an acute MI.

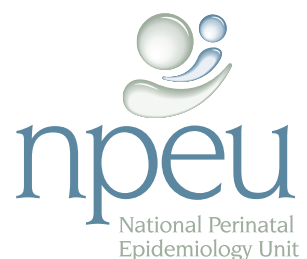
Please return the completed form to:

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

**Fax: 01865 289701
Phone: 01865 289714**



Royal College of
Obstetricians and
Gynaecologists



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.

Section 1: Woman's details

- 1.1 Year of birth**
- 1.2 Ethnic group^{1*}** (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 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

Please indicate whether any of the following were present

- 3.1 Current or previous essential hypertension** Yes No
- 3.2 History of ischaemic heart disease** (include angiography/angioplasty) Yes No
If Yes, please specify diagnosis _____
- 3.3 History of congenital heart disease** Yes No
If Yes, please specify diagnosis _____
- 3.4 History of cardiac surgery** Yes No
If Yes, please specify
Valve replacement surgery metal other
Other type of surgery, please specify
- 3.5 Diabetes mellitus** Yes No
If Yes, please specify insulin dependant (type 1) non-insulin dependant (type 2)
date of onset (if known) / /
- 3.6 Known hyperlipidaemia** Yes No
- 3.7 Other previous or pre-existing medical problems^{3*}** Yes No
If Yes, please specify _____
- 3.8 History of premature ischaemic heart disease in first degree relatives** (males < 55 years, females < 60 years) Yes No
- 3.9 Previous use of combined oral contraceptives** Yes No
If Yes, please specify date discontinued (if known) / /

*For guidance please see back cover

3.10 Other risk factor for coronary heart disease^{4*}Yes No

If Yes, please specify _____

Section 4a: This Pregnancy**4a.1 Final Estimated Date of Delivery (EDD)^{5*}**

□□/□□/□□

4a.2 Was this pregnancy a multiple pregnancy?Yes No If Yes, please specify number of fetuses **4a.3 Were there problems in this pregnancy?^{2*}**Yes No

If Yes, please specify _____

4a.4 Was pregnancy-induced hypertension or pre-eclampsia diagnosed in this pregnancy?Yes No **4a.5 Was threatened pre-term labour diagnosed in this pregnancy?**Yes No

If No, please go to next question

If Yes, was tocolytic therapy used?

Yes No

If tocolytic therapy was used, specify _____ agent _____ date treatment commenced

□□/□□/□□

Section 4b: Diagnosis of myocardial infarction**4b.1 Date and time of diagnosis**

□□/□□/□□ □□:□□

4b.2 Site of MI/ECG changes (e.g. anterior/inferior/septal)**4b.3 Did the woman have any of the following?**1. Symptoms consistent with myocardial ischaemia Yes No 2. ECG Yes No

If Yes, were any of the following changes observed (tick all that apply)

ST elevation ST depression Q waves 3. Echocardiography Yes No If Yes, was hypokinesia of the myocardial wall seen? Yes No

If Yes, please specify which wall _____

4. Coronary angiography Yes No

If Yes, please indicate the findings below (tick all that apply)

Coronary atherosclerosis Intracoronary thrombus Coronary artery dissection Coronary artery aneurysm Normal coronary arteries **Section 4c: Laboratory tests****4c.1 Please record the blood levels of the following at diagnosis and at their maximum level**

Marker	Level at diagnosis	Highest recorded level	Date highest level was recorded
Troponin I (ng/ml)	□□.□	□□.□	□□/□□/□□
Troponin T (ng/ml)	□□.□	□□.□	□□/□□/□□
Creatine Kinase MB fraction (CK-MB) (U/l)	□□.□	□□.□	□□/□□/□□

*For guidance please see back cover

Section 4d: Therapy

4d.1 Please specify if any of the following therapies were used (tick all that apply)

Agent	Prior to pregnancy	During pregnancy	At the time of MI	Following the MI
ACE inhibitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antihypertensives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aspirin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
β-blockers (e.g. labetalol, atenolol)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calcium antagonists (e.g. nifedipine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clopidogrel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low molecular weight heparin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Statins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unfractionated heparin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warfarin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Angioplasty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CABG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardioversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coronary artery stenting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intra-aortic balloon pump	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary pacing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thrombolysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If thrombolysis was used, please indicate agent used, whether systemic or intracoronary and whether any complications of use were noted

Section 4e: Complications

4e.1 Please indicate if any of the following complications occurred during the pregnancy

Morbidity	Yes	Date of diagnosis
Cardiac arrest	<input type="checkbox"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
Cardiogenic shock	<input type="checkbox"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
Abnormal heart rhythm	<input type="checkbox"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
Cardiac failure	<input type="checkbox"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>
Other (please specify)	<input type="checkbox"/>	<input type="text"/> / <input type="text"/> / <input type="text"/>

Section 5: Delivery

5.1 Is this woman still undelivered?

Yes No

If Yes, will she be receiving the rest of her antenatal care from the current hospital?

Yes No If care will be provided at a different hospital, please indicate name of hospital providing future care, then *go to section 7* _____If No, *please continue*

5.2 Was delivery induced?

Yes No

If Yes, please state indication _____

Was vaginal prostaglandin used?

Yes No

5.3 Did the woman labour?

Yes No

5.4 Was delivery by caesarean section?

Yes No If Yes, please state whether elective OR emergency Please state grade of urgency^{6*}

and give indication for caesarean section

Method of anaesthesia regional OR general anaesthetic

Section 6: Outcomes

Section 6a: Woman

6a.1 Was the woman admitted to a coronary care unit?

Yes No

If Yes, date of admission

□□ / □□ / □□

duration of stay (days)

□□

Or Tick if woman is still in coronary care unit Or Tick if woman was transferred to another hospital CCU

6a.2 Was the woman admitted to ITU/HDU?

Yes No

If Yes, date of admission

□□ / □□ / □□

duration of stay (days)

□□

Or Tick if woman is still in ITU/HDU Or Tick if woman was transferred to another hospital ITU

6a.3 Did any other major maternal morbidity occur?^{7*}

Yes No

If Yes, please specify _____

6a.4 Did the woman die?

Yes No

If Yes, please specify date and time of death

□□ / □□ / □□ □□ : □□

If the woman died, what was the primary cause of death as stated on the death certificate?

Was a post mortem examination undertaken?

Yes No

If Yes, please indicate the findings below (tick all that apply)

Coronary atherosclerosis Intracoronary thrombus Coronary artery dissection Coronary artery aneurysm Normal coronary arteries Evidence of acute myocardial infarction

*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

□□ / □□ / □□ □□ : □□

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 Was the infant stillborn?

Yes No

If Yes, go to section 7

6b.5 5 min Apgar

□□

6b.6 Was the infant admitted to the neonatal unit?

Yes No

If Yes, duration of stay (days)

□□

Or Tick if infant is still in NICU/SBCU

Or Tick if infant was transferred to another hospital

6b.7 Did any major infant complications occur?^{8*}

Yes No

If Yes, please specify _____

6b.8 Did this infant die?

Yes No

If Yes, please specify date of death

□□ / □□ / □□

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:

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.

If you are unable to make a copy please tick the box

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. Possible risk factors for acute myocardial infarction in pregnancy, including:

Low levels of HDL cholesterol
High levels of LDL cholesterol
Cocaine use
Valvular heart disease
Vasculitis
Bromocriptine/cabergoline use

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
Mendleson's syndrome
Renal failure
Thrombotic event
Septicaemia
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