Out of Hospital Cardiac Arrest Reviewer Assessment Form

A. Review Details

1a. Date of Case Reviewer meeting

1b. Case Reviewers initials

2. NCEPOD Site ID

Value should be no more than 999,999

B. Patient Details

1a. Age at presentation to hospital

[_____ years] ☐ Unknown

1b. Sex

○ Male ○ Female

2a. Did the patient have any past medical history relevant to their cardiac arrest?

○ Yes ○ No ○ Unknown

2b. If answered "Yes" to [2a] then:
Past medical history

☐ Previous cardiac arrest ☐ Ischemic heart disease
☐ Implantable defibrillator ☐ Implantable pacemaker
☐ Previous coronary surgery ☐ Previous percutaneous coronary intervention
☐ Hypertension ☐ Stroke
☐ Dementia ☐ VTE
☐ Diabetes Mellitus ☐ Chronic respiratory disease
☐ Home oxygen ☐ Renal dialysis
☐ Cocaine abuse ☐ Alcohol abuse
☐ Other drug abuse ☐ Smoking
☐ Epilepsy

Please specify any additional options here...

[_____]

3a. Was the the patient taking any of the medications (or other relevant medication) listed below prior to their cardiac arrest?

○ Yes ○ No ○ Unknown

3b. If answered "Yes" to [3a] then:
Which of the following was the patient taking?

☐ Anti-platelet agent(s) ☐ Statin ☐ Anticoagulant
☐ Antihypertensives ☐ Antiarrhythmics ☐ Anticonvulsants
☐ Insulin/antiglycaemic

Please specify any additional options here...

[_____]

---

4. Had the patient been recently discharged from hospital (within 30 days)?

○ Yes ○ No ○ Unknown

---

5. What was the patient's level of function as assessed using the Rockwood Frailty Score, prior to their cardiac arrest?
See definitions sheet provided

○ 1. Very fit ○ 2. Well ○ 3. Managing well
○ 4. Vulnerable ○ 5. Mildly frail ○ 6. Moderately frail
○ 7. Severely frail ○ 8. Very severely frail ○ 9. Terminally ill
○ Unable to answer

6a. Was the patient entered into a clinical trial for their cardiac arrest treatment?

○ Yes ○ No ○ Unknown

6b. If answered "Yes" to [6a] then:
Which trial?

C. Ambulance service information

1a. Date of cardiac arrest?

☐ Unknown

1b. Time of cardiac arrest?

☐ Unknown

1c. Where did the cardiac arrest occur?

○ Own home   ○ Nursing home
○ Residential home   ○ Work place
○ Public place   ○ Transport hub (station/airport etc)
○ Unknown

If not listed above, please specify here...

---

2. Was the patient bought to hospital by ambulance?

○ Yes   ○ Yes but no PRF   ○ No   ○ Unknown

Timings

3a. If answered "Yes" to [2] then:
Time of 999 call?

☐ Unknown

3b. If answered "Yes" to [2] then:
Time ambulance crew attended patient?

☐ Unknown

3c. If answered "Yes" to [2] then:
Time of first responder (professional responding to call; if relevant) to arrive at patient?
please leave blank if not applicable

☐ Unknown

3d. If answered "Yes" to [2] then:
Time of departure from scene?

☐ Unknown

3e. If answered "Yes" to [2] then:
Time of arrival at hospital?

☐ Unknown

4a. If answered "Yes" to [2] then:
Was the cardiac arrest:

○ Witnessed (bystander)
○ Witnessed (emergency medical service present)
○ Unwitnessed   ○ Unknown

If not listed above, please specify here...

4b. If answered "Yes" to [2] then:
Was CPR given by a bystander?

○ Yes   ○ No   ○ Unknown

4c. If answered "Yes" to [4b] and "Yes" to [2] then:
Did bystander CPR achieve ROSC?

◯ Yes   ◯ No   ◯ Unknown

4d. If answered "Yes" to [2] then:
Was it documented on the ambulance patient report form (PRF) that there was a delay in commencing CPR?

◯ Yes   ◯ No

4e. If answered "Yes" to [4d] and "Yes" to [2] then:
How long was the delay (CPR)?

[   ] minutes   ☐ Unknown

5a. If answered "Yes" to [2] then:
Initial rhythm (pre-hospital)

◯ Shockable   ◯ Non shockable   ◯ Unknown

If not listed above, please specify here...
[   ]

5b. If answered "Yes" to [2] then:
Was a defibrillator used?

◯ Yes   ◯ No   ◯ Unknown

5c. If answered "Yes" to [2] and "Yes" to [5b] then:
Was it a public access defibrillator?

◯ Yes   ◯ No   ◯ Unknown

5d. If answered "Yes" to [5b] and "Yes" to [2] then:
Time of first shock?

[   ]   ☐ Unknown

5e. If answered "Yes" to [5b] and "Yes" to [2] then:
Number of shocks administered?

[   ]   ☐ Unknown

---

6. If answered "Yes" to [2] then:
Was a mechanical CPR device used?

◯ Yes   ◯ No   ◯ Unknown

---

7. If answered "Yes" to [2] then:
Time of onset of sustained (> 20 minutes) ROSC?

[   ]   ☐ Unknown

8a. If answered "Yes" to [2] then:
How was the patients airway managed pre-hospital (most invasive management pre-hospital)?

◯ Own   ◯ Supraglottic   ◯ Tracheal tube   ◯ Unknown

If not listed above, please specify here...
[   ]

8b. If answered "Supraglottic" or "Tracheal tube" to [8a] and "Yes" to [2] then:
Time of insertion (pre-hospital airway)

[   ]   ☐ Unknown

8c. If answered "Yes" to [2] then:
How was the patients ventilation managed pre-hospital (most invasive management pre-hospital)?

○ Self   ○ Assisted (bag/mask)   ○ Assisted (mechanical)
○ Unknown

If not listed above, please specify here...

[   ]

9a. If answered "Yes" to [2] then:
Which drugs were given pre-hospital?

☐ Adrenaline   ☐ Atropine   ☐ Amiodarone   ☐ None
☐ Unknown

Please specify any additional options here...

[   ]

9b. If answered "Adrenaline" to [9a] and "Yes" to [2] then:
What cumulative dose of adrenaline was given during CPR?

[   ]

9c. If answered "Adrenaline" to [9a] and "Yes" to [2] then:
Was adrenaline used post resuscitation (for further support)?

○ Yes   ○ No   ○ Unknown

10a. If answered "Yes" to [2] then:
Was the patient transported:

○ In cardiac arrest   ○ With ROSC   ○ ROSC achieved in transit
○ Unknown

If not listed above, please specify here...

[   ]

10b. If answered "With ROSC" or "ROSC achieved in transit" to [10a] and "Yes" to [2] then:
Initial rhythm on sustained ROSC:

○ Sinus   ○ Atrial fibrillation   ○ Heart block
○ Bradycardia   ○ Narrow complex tachycardia   ○ Broad complex tachycardia
○ Unclear (eg BBB)   ○ Unknown

If not listed above, please specify here...

[   ]

10c. If answered "Yes" to [2] then:
Was ST elevation/bundle-branch block present?

○ Yes   ○ No   ○ Unknown

11a. If answered "Yes" to [2] then:
Best post-arrest conscious level pre-hospital: (highest ACVPU new):

○ Alert   ○ Confusion   ○ Voice   ○ Pain
○ Unresponsive   ○ Not recorded

11b. If answered "Yes" to [2] then:
Best post-arrest conscious level pre-hospital: (highest GCS):

○ 3   ○ 4   ○ 5   ○ 6
○ 7   ○ 8   ○ 9   ○ 10
○ 11   ○ 12   ○ 13   ○ 14
○ 15   ○ Not recorded

12a.If answered "Yes" to [2] then:
   How would you rate the pre-hospital care?

   ○ Good   ○ Adequate   ○ Poor   ○ Unacceptable
   ○ Unable to rate

12b.If answered "Yes" to [2] then:
   Please expand on your answer (pre-hospital)

D. Arrival to hospital

1. How was the patient transported to hospital?

⭘ Land ambulance   ⭘ Air ambulance   ⭘ Air and land ambulance
⭘ Unknown

If not listed above, please specify here...

[   ]

2a. Where was the patient first received in hospital?

⭘ Emergency Department
⭘ Direct to PCI service (cardiac catheterisation lab)
⭘ HDU
⭘ CCU
⭘ ICU
⭘ Unknown

If not listed above, please specify here...

[   ]

2b. Date of arrival to ED or other first hospital location

[   ]   ☐ Unknown

2c. Time of arrival to ED or other first hospital location

[   ]   ☐ Unknown

3a. Was a pre-alert system used (arrival)?

⭘ Yes   ⭘ No   ⭘ Unknown

3b. Was there a co-ordinated team response on arrival (arrival)?

⭘ Yes   ⭘ No   ⭘ Unknown

3c. In your opinion was the initial response (specialities and seniority) appropriate?

⭘ Yes   ⭘ No   ⭘ Unknown

3d. If answered "No" to [3c] then:
Please expand on your answer (initial response)

[   ]

4a. What was the documented downtime?

[minutes]   ☐ Unknown

4b. Does the documented downtime change as more information is available?

⭘ Yes   ⭘ No   ⭘ Unknown

4c. If answered "Yes" to [4b] then:
What was the revised documented downtime (min)?

| | minutes | ☐ Unknown |

Airway

5a. Was the airway device changed on arrival to hospital?

○ Yes   ○ No   ○ Unknown

5b. Please list the MOST invasive approach to airway management in the ED or first hospital location

○ Patient's own   ○ Patient's own with oro/nasopharyngeal
○ Supraglottic   ○ Tracheal tube

If not listed above, please specify here...

Breathing

5c. Oxygen saturation on arrival (arrival):

| | % | ☐ Unknown |

Value should be no more than 100

5d. Inspired oxygen concentration (%) (arrival):

| | % | ☐ Not Applicable | ☐ Unknown |

Value should be no more than 100

5e. Inspired oxygen concentration (l/min) (arrival):

| | l/min | ☐ Not Applicable | ☐ Unknown |

5f. Did the patient require assisted ventilation (arrival)?

○ Yes   ○ No   ○ Unknown

5g. Was there a clinical suspicion of aspiration (arrival)?
gastric contents seen below cords or in airway channel of artificial airway

○ Yes   ○ No   ○ Unknown

First blood gas result
Please provide details of the first arterial blood gas result in hospital. If the patient had a venous blood gas measurement please check the appropriate box

6a. Arterial or venous blood gas?

○ Arterial   ○ Venous   ○ Not done   ○ Unknown

6b. What time was the first blood gas measurement (arrival)?

| | ☐ Unknown |

6c. pH (arrival)

| | ☐ Unknown |

6d. pO2 (arrival)

| | kPa | ☐ Unknown |

6e. pCO2 (arrival)

| | kPa | ☐ Unknown |

6f. Lactate (arrival):

[_____] mmol/L ☐ Unknown

6g. Bicarbonate (arrival)

[_____] mmol/L ☐ Unknown

6h. Base excess (arrival)

[_____] mEq/L ☐ Unknown

Value should be no less than -100

6i. Haemoglobin (arrival)

[_____] g/dl ☐ Unknown

6j. Potassium (arrival)

[_____] mmol/L ☐ Unknown

6k. FiO2 at the time of ABG (arrival %)

[_____] % ☐ Unknown

6l. FiO2 at the time of ABG (arrival l/min)

[_____] l/min ☐ Not Applicable ☐ Unknown

- -

Circulation

7a. Heart rate (arrival)

[_____] ☐ Unknown

7b. Systolic BP (arrival)

[_____] ☐ Unknown

7c. Diastolic BP (arrival)

[_____] ☐ Unknown

7d. On arrival was the patient's blood pressure supported with vasoconstrictors and/or inotropes?

○ Yes inotropes   ○ Yes vasoconstrictors
○ Yes inotropes and vasoconstrictors   ○ Neither
○ Unknown

7e. What was the heart rhythm on arrival (arrival)?

○ Sinus   ○ Atrial fibrillation   ○ Heart block
○ Broad complex tachycardia   ○ Narrow complex tachycardia   ○ Unclear (eg BBB)

If not listed above, please specify here...
[_____]

7f. Which of the following were present on the first ECG (arrival)?

☐ Normal   ☐ ST elevation/bundle-branch block
☐ ST depression   ☐ Narrow complex tachycardia
☐ Broad complex tachycardia ☐ Bradycardia
☐ Agonal rhythm   ☐ Asystole
☐ Atrial fibrillation   ☐ Not applicable ECG not done on arrival
☐ Unknown

Please specify any additional options here...
[_____]

8a. Which of the following treatments were given on arrival?

☐ Antibiotics ☐ Anticonvulsants ☐ Anticoagulants ☐ Anti-arrhythmics
☐ Anti-platelets ☐ Analgesics ☐ Beta blocker ☐ Sedatives
☐ Thrombolysis ☐ Muscle relaxants ☐ None ☐ Unknown

Please specify any additional options here...

[   ]

8b. Which of the following were used for monitoring on arrival?
In the ED or other location the patient was first treated

☐ Pulse Oximetry ☐ ETCO2 ☐ ECG
☐ Arterial line ☐ Non-invasive blood pressure ☐ EEG
☐ Temperature ☐ None ☐ Unknown

Please specify any additional options here...

[   ]

9a. If answered "Emergency Department" to [2a] then:
Did the patient die in the ED?

◯ Yes ◯ No ◯ Unknown

9b. If answered "Emergency Department" to [2a] and "Yes" to [9a] then:
Was this a planned withdrawal of treatment?

◯ Yes ◯ No ◯ Unknown

10a. If answered "Emergency Department" to [2a] and "No" to [9a] then:
At what time was the patient ready to leave ED?

[   ] ☐ Unknown

10b. If answered "Emergency Department" to [2a] and "No" to [9a] then:
What time did the patient leave ED?

[   ] ☐ Unknown

11a. If answered "Emergency Department" to [2a] then:
How would you rate the care the patient received in ED?

◯ Good ◯ Adequate ◯ Poor
◯ Unacceptable ◯ Unable to assign grade

11b. If answered "Emergency Department" to [2a] then:
Please expand on your answer (ED care)

[   ]

1a. Is it documented that the patient was discussed with a cardiologist?

◯ Yes   ◯ No   ◯ Unknown

1b. If answered "No" to [1a] then:
If not discussed with a Cardiologist in your opinion should they have been?

◯ Yes   ◯ No   ◯ Unknown

1c. If answered "No" to [1a] and "Yes" to [1b] then:
Please expand on your answer (cardiologist new)

[text box]

2a. Was the patient taken to the cath lab at any point during this hospital attendance/admission?

◯ Yes   ◯ No   ◯ Unknown

2b. If answered "Yes" to [2a] then:
Date patient went to cath lab

[   ]   ☐ Unknown

2c. If answered "Yes" to [2a] then:
Time patient went to cath lab

[   ]   ☐ Unknown

3a. Was coronary revascularization indicated?

◯ Yes   ◯ No   ◯ Unknown

3b. If answered "Yes" to [3a] then:
Was coronary revascularization attempted?

◯ Yes   ◯ No   ◯ Unknown

3c. If answered "Yes" to [3a] and "Yes" to [3b] then:
Was coronary revascularization successful?

◯ Yes   ◯ No   ◯ Unknown

4a. If answered "Yes" to [2a] then:
Did the patient return to the cath lab at any point during this admission?

◯ Yes   ◯ No   ◯ Unknown

4b. If answered "Yes" to [4a] then:
   Please provide details (PCI return)

[   ]

5a. If answered "Yes" to [2a] then:
   In your opinion was there a delay in going to the PCI lab?

   ○ Yes   ○ No   ○ Unknown

5b. If answered "Yes" to [5a] then:
   Was this delay (cath lab)

   ○ Clinical   ○ Non clinical   ○ Both   ○ Unknown

5c. If answered "Yes" to [2a] and "Yes" to [5a] and "Clinical", "Non clinical" or "Both" to [5b]
   then:
   Please expand on your answer (delay PCI)

[   ]

6a. In your opinion was there room for improvement in the cardiac management of this
   patient?
   Please answer this question even if the patient did not go to the cath lab

   ○ Yes   ○ No   ○ Unknown

6b. If answered "Yes" to [6a] then:
   Please expand on your answer (cardiac)

[   ]

7a. How would you rate the cardiac care the patient received?

◯ Good   ◯ Adequate   ◯ Poor   ◯ Unacceptable

◯ Unknown

7b. Please expand on your answer (rate cardiac)

F. Admission to Hospital

1a. To which ward was the patient first admitted post ED and/or PCI service?

○ General ITU (level 3 or mixed level 2/3)   ○ Cardiac ITU (level 3)
○ General HDU (level 2)   ○ Cardiac HDU (level 2)
○ CCU (level 2)   ○ General/acute ward
○ Cardiology ward   ○ Level 3 (type unknown)
○ Level 2 (type unknown)   ○ Level 0/1 (type unknown)
○ Unknown   ○ NA patient died in ED or PCI service

If not listed above, please specify here...

[ ]

1b. In your opinion was this an appropriate level of care for the patient?

○ Yes   ○ No
○ Unknown   ○ NA, patient died before being admitted

1c. If answered "Yes" or "No" to [1b] then:
Please provide reason(s) for your answer

[ ]

1a. Which of the following investigations were undertaken during this admission?

☐ CT head ☐ CT pulmonary angiogram
☐ CT (other) ☐ Point of care ultrasound / FAST scan
☐ POC echocardiogram (non cardiologist performing)
☐ Cardiology Echocardiogram ☐ Serial ECG
☐ High sensitivity troponin ☐ Unknown
☐ None

Please specify any additional options here...

_____

Dates and times of investigations

1b. If answered "CT head" to [1a] then:
CT Head (date)

_____ ☐ Unknown

1c. If answered "CT head" to [1a] then:
CT head (time)

_____ ☐ Unknown

1d. If answered "CT pulmonary angiogram" to [1a] then:
CT pulmonary angiogram

_____ ☐ Unknown

1e. If answered "CT pulmonary angiogram" to [1a] then:
CT pulmonary angiogram (time)

_____ ☐ Unknown

1f. If answered "CT (other)" to [1a] then:
CT other

_____ ☐ Unknown

1g. If answered "CT (other)" to [1a] then:
CT other (time)

_____ ☐ Unknown

1h. If answered "Point of care ultrasound / FAST scan" to [1a] then:
Point of care ultrasound / FAST scan

_____ ☐ Unknown

1i. If answered "Point of care ultrasound / FAST scan" to [1a] then:
Point of care ultrasound / FAST scan (time)

_____ ☐ Unknown

1j. If answered "POC echocardiogram (non cardiologist performing)" to [1a] then:
POC echocardiogram (non cardiologist performing)

_____ ☐ Unknown

1k. If answered "POC echocardiogram (non cardiologist performing)" to [1a] then:
POC echocardiogram (non cardiologist performing) (time)

_____ ☐ Unknown

1l. If answered "Cardiology Echocardiogram" to [1a] then:
Cardiology Echocardiogram

_____ ☐ Unknown

1m. If answered "Cardiology Echocardiogram" to [1a] then:
Cardiology Echocardiogram (time)

☐ Unknown

1n. If answered "Serial ECG" to [1a] then:
Serial ECG

☐ Unknown

1o. If answered "Serial ECG" to [1a] then:
Serial ECG (time)

☐ Unknown

1p. If answered "High sensitivity troponin" to [1a] then:
High sensitivity troponin

☐ Unknown

1q. If answered "High sensitivity troponin" to [1a] then:
High sensitivity troponin (time)

☐ Unknown

1r. If answered "CT head" to [1a] then:
Other (date)

☐ Unknown

1s. If answered "CT head" to [1a] then:
Other (time)

☐ Unknown

2a. In your opinion were any investigations omitted that should have been undertaken?

○ Yes   ○ No   ○ Unknown

2b. If answered "Yes" to [2a] then:
Which investigations?

☐ CT head   ☐ CT pulmonary angiogram
☐ CT (other)   ☐ Point of care ultrasound / FAST scan
☐ POC echocardiogram (non cardiologist performing)
☐ Cardiology Echocardiogram   ☐ Serial ECG
☐ High sensitivity troponin

Please specify any additional options here...

2c. If answered "Yes" to [2a] then:
Please expand on your answer (investigations)

3a. In your opinion were there any delays to carrying out any of the investigations?

○ Yes   ○ No

○ Not applicable none undertaken   ○ Unknown

3b. If answered "Yes" to [3a] then:
Please expand on your answer (delayed investigation)

H. Level 2/3 admissions

1a. Was the patient admitted to a level 2/3 ward

○ Yes   ○ No

○ NA patient died in ED or PCI service

1b. If answered "Yes" to [1a] then:
Date of admission to level 2/3 care

[   ]   ☐ Unknown

1c. If answered "Yes" to [1a] then:
Time of admission to level 2/3 care

[   ]   ☐ Unknown

1d. If answered "No" to [1a] then:
If the patient was not admitted to level 2/3 care in your opinion should they have been?

○ Yes   ○ No   ○ Unknown

1e. If answered "Yes" to [1d] then:
Please expand on your answer (not admitted to level 2/3)

[   ]

Airway

2a. If answered "Yes" to [1a] then:
Was the patient intubated?

○ Yes   ○ No   ○ Unknown

2b. If answered "Yes" to [1a] and "Yes" to [2a] then:
How many hours did they remain intubated?

[hours]   ☐ Unknown

2c. If answered "Yes" to [1a] then:
Was a tracheostomy performed?

○ Yes   ○ No   ○ Unknown

2d. If answered "Yes" to [1a] and "Yes" to [2c] then:
Was this:

○ Surgical   ○ Percutaneous

2e. If answered "Yes" to [2c] then:
Indication for tracheostomy

☐ Respiratory   ☐ Neurological   ☐ Unclear

Please specify any additional options here...
[   ]

2f. If answered "Yes" to [1a] and "Yes" to [2c] then:
Date of insertion:

[   ]   ☐ Unknown

2g. If answered "Yes" to [1a] and "Yes" to [2c] then:
Time of insertion:

[   ]   ☐ Unknown

2h. If answered "Yes" to [1a] and "Yes" to [2c] then:
Date of removal:

[   ]   ☐ Unknown

2i. If answered "Yes" to [1a] and "Yes" to [2c] then:
Time of removal:

[   ]   ☐ Unknown

Breathing

3a. If answered "Yes" to [1a] then:
Did the patient require invasive ventilatory support?

○ Yes   ○ No   ○ Unknown

3b. If answered "Yes" to [1a] and "Yes" to [3a] then:
Time to liberation from ventilation (extubation > 48 hours)

[hours]   ☐ Not Applicable   ☐ Unknown

3c. If answered "Yes" to [1a] then:
Were prophylactic antibiotics given to prevent pneumonia?

○ Yes   ○ No   ○ Unknown

3d. If answered "Yes" to [1a] then:
Did the patient develop ventilator associated pneumonia?

○ Yes   ○ No   ○ Unknown

Circulation

4a. If answered "Yes" to [1a] then:
Was a target BP (MAP or systolic) used?

○ MAP   ○ Systolic   ○ No   ○ Unknown

4b. If answered "Yes" to [1a] and "MAP" or "Systolic" to [4a] then:
What was the target BP?

[mm/Hg]   ☐ Unknown

4c. If answered "Yes" to [1a] then:
Did the patient require blood pressure support?

○ Yes   ○ No   ○ Unknown

4d. If answered "Yes" to [1a] and "Yes" to [4c] then:
Were any of the following used?

☐ Vasoconstrictors   ☐ Inotropes   ☐ VA ECMO
☐ VV ECMO   ☐ Ventricular assist device   ☐ Balloon pump

Please specify any additional options here...

[   ]

4e. If answered "Yes" to [1a] then:
Was cardiac output monitoring used?

○ Yes   ○ No   ○ Unknown

5a. If answered "Yes" to [1a] then:
In your opinion was there room for improvement in the level 2/3 care management of this patient?

○ Yes   ○ No   ○ Unknown

5b. If answered "Yes" to [1a] then:
Please expand on your answer (level 2/3)

I. Targeted Temperature Management

1a. Was targeted temperature management (TTM) used?

○ Yes   ○ No   ○ Not indicated   ○ Unknown

1b. If answered "Yes" to [1a] then:
Was there a clearly documented plan for the temperature and duration of TTM?

○ Yes   ○ No   ○ Unknown

1c. If answered "Yes" to [1a] then:
Was the target temperature range documented?

○ Yes   ○ No

1d. If answered "Yes" to [1a] and "Yes" to [1c] then:
What was the target temperature range?

○ 32-36   ○ <36   ○ <37   ○ Unknown

If not listed above, please specify here...

[   ]

1e. If answered "Yes" to [1a] then:
What was the planned duration of TTM?

[   ] hours   ☐ Unknown

2a. If answered "Yes" to [1a] then:
Date TTM commenced:

[   ]   ☐ Unknown

2b. If answered "Yes" to [1a] then:
Time TTM commenced:

[   ]   ☐ Unknown

2c. If answered "Yes" to [1a] then:
Date TTM discontinued

[   ]   ☐ Unknown

2d. If answered "Yes" to [1a] then:
Time TTM discontinued:

[   ]   ☐ Unknown

3a. If answered "Yes" to [1a] then:
Highest temperature < 24h

[   ]   ☐ Not Applicable   ☐ Unknown

3b. If answered "Yes" to [1a] then:
Highest temperature 24 - 48h

[   ]   ☐ Not Applicable   ☐ Unknown

3c. If answered "Yes" to [1a] then:
Highest temperature 48 - 72h

[   ]   ☐ Not Applicable   ☐ Unknown

3d. If answered "Yes" to [1a] then:
Highest temperature 72 - 96h

[   ]   ☐ Not Applicable   ☐ Unknown

4a. If answered "Yes" to [1a] then:
How was TTM delivered?

☐ Ice packs ☐ Cold intravenous fluids ☐ External cooling device
☐ Intravascular device ☐ Unknown

Please specify any additional options here...

☐

4b. If answered "Yes" to [1a] then:
Was the TTM device controlled using feedback of temperature measurement?

○ Yes ○ No ○ Unknown

4c. If answered "Yes" to [1a] then:
Was TTM discontinued earlier than planned?

○ Yes ○ No ○ Unknown

5a. If answered "Yes" or "No" to [1a] then:
In your opinion was there room for improvement in the TTM management of this patient?
Please answer this question even if TTM was not undertaken

○ Yes ○ No ○ Unknown

5b. If answered "Yes" to [5a] then:
Please expand on your answer (TTM)?

☐

6a. If answered "Yes" or "No" to [1a] then:
How would you rate the TTM of this patient?

○ Good ○ Adequate ○ Poor ○ Unacceptable
○ Unknown

6b. If answered "Yes" or "No" to [1a] then:
Please expand on your answer (rate TTM)

☐

J. Neurological assessment and management

1a. Highest GCS within 24h of ROSC?

- ○ 3
- ○ 7
- ○ 11
- ○ 15

- ○ 4
- ○ 8
- ○ 12
- ○ Unknown

- ○ 5
- ○ 9
- ○ 13

- ○ 6
- ○ 10
- ○ 14

1b. Highest GCS 24 - 48h?

- ○ 3
- ○ 7
- ○ 11
- ○ 15

- ○ 4
- ○ 8
- ○ 12
- ○ Unknown

- ○ 5
- ○ 9
- ○ 13
- ○ Not Applicable

- ○ 6
- ○ 10
- ○ 14

1c. Highest GCS 48-72h?

- ○ 3
- ○ 7
- ○ 11
- ○ 15

- ○ 4
- ○ 8
- ○ 12
- ○ Unknown

- ○ 5
- ○ 9
- ○ 13
- ○ Not Applicable

- ○ 6
- ○ 10
- ○ 14

1d. Highest GCS 72-96h?

- ○ 3
- ○ 7
- ○ 11
- ○ 15

- ○ 4
- ○ 8
- ○ 12
- ○ Unknown

- ○ 5
- ○ 9
- ○ 13
- ○ Not applicable

- ○ 6
- ○ 10
- ○ 14

1e. Highest GCS during admission?

- ○ 3
- ○ 7
- ○ 11
- ○ 15

- ○ 4
- ○ 8
- ○ 12
- ○ Unknown

- ○ 5
- ○ 9
- ○ 13

- ○ 6
- ○ 10
- ○ 14

---

2. Was continuous EEG monitoring used?

- ○ Yes
- ○ No
- ○ Unknown

3a. Was the patient sedated?

- ○ Yes
- ○ No
- ○ Unknown

3b. If answered "Yes" to [3a] then:
Which drugs were used?

- ☐ Fentanyl
- ☐ Propofol

- ☐ Alfentanil
- ☐ Midazolam

- ☐ Remifentanil
- ☐ Dexmedetomidine

- ☐ Morphine

Please specify any additional options here...

[   ]

3c. If answered "Yes" to [3a] then:
Number of hours continuous sedation used:

[hours]   ☐ Unknown

4a. Was the patient able to obey commands at any stage of the admission?

- ○ Yes
- ○ No
- ○ Unknown

4b. If answered "Yes" to [4a] then:
What date did this first occur?

[   ]   ☐ Unknown

4c. If answered "Yes" to [4a] then:
What time did this first occur?

[_____] ☐ Unknown

5a. Was any seizure activity noted?

○ Yes ○ No ○ Unknown

5b. If answered "Yes" to [5a] then:
When was seizure activity noted?

☐ < 24h ☐ 24-48h ☐ > 48 ☐ Time unknown

Please specify any additional options here...
[_____]

5c. If answered "Yes" to [5a] then:
What type of seizure?

☐ Focal/partial ☐ Generalised
☐ Myoclonic ☐ Non-convulsive (EEG diagnosed)

Please specify any additional options here...
[_____]

5d. Were anti-epileptic drugs started?

○ Yes ○ No ○ Unknown

5e. If answered "Yes" to [5d] then:
Which drugs were started?

[_____]

6a. In your opinion was there room for improvement in the neurological management of this patient?

○ Yes ○ No ○ Unknown

6b. Please expand on your answer (neurological)

[   ]

K. Prognostication

1a. Was neurological prognostication undertaken?

○ Yes   ○ No   ○ Not applicable   ○ Unknown

1b. If answered "Yes" to [1a] then:
When was neurological prognostication first undertaken?

[   ]   ☐ Unknown

1c. If answered "Yes" to [1a] then:
When was neurological prognostication first undertaken?

[   ]   ☐ Unknown

1d. If answered "Yes" to [1a] then:
Was neurological prognostication repeated?

○ Yes   ○ No   ○ Unknown

1e. If answered "Yes" to [1d] and "Yes" to [1a] then:
What date was neurological prognostication last undertaken?

[   ]   ☐ Unknown

1f. If answered "Yes" to [1d] and "Yes" to [1a] then:
When was neurological prognostication last undertaken?

[   ]   ☐ Unknown

- -

2a. If answered "Yes" to [1a] then:
Were biomarkers of neurological injury measured?

☐ Yes Neuron-specific enolase (NSE)   ☐ Yes S-100B
☐ No   ☐ Unknown

Please specify any additional options here...
[   ]

2b. If answered "Yes" to [1a] then:
Which of the following were undertaken (clinical prognostication)?

☐ Pupillary light reflexed   ☐ Corneal reflexes   ☐ Motor response to pain
☐ No clinical prognostication

Please specify any additional options here...
[   ]

2c. If answered "Yes" to [1a] then:
What was undertaken (electrophysiology)?

☐ EEG intermittent
☐ EEG continuous
☐ EEG with Bispectral (BIS) moinitoring
☐ SSEPs (short-latency somatosensory evoked potentials)
☐ No electrophysiology

Please specify any additional options here...
[   ]

2d. If answered "Yes" to [1a] then:
What was undertaken (imaging)?

☐ CT Brain /cerebral CTA   ☐ MRI Brain /Diffusion Weighted Imaging
☐ 4 vessel cerebral catheter angiography   ☐ No imaging

Please specify any additional options here...
[   ]

3a. If answered "Yes" to [1a] then:
In your opinion was the timing of neurological prognostication appropriate?

◯ Yes   ◯ No   ◯ Unknown

3b. If answered "Yes" to [1a] and "Yes" or "No" to [3a] then:
Please expand on your answer (timing prognostication)

4a. If answered "Yes" to [1a] then:
In your opinion was the process for neurological prognostication appropriate?

◯ Yes   ◯ No   ◯ Unknown

4b. If answered "Yes" to [1a] then:
Please expand (process prog)

L. Escalation planning

1. Did the patient have a prior advance directive?

◯ Yes   ◯ No   ◯ Unknown

---

2. Did the patient have a DNACPR order in place prior to hospital admission?

◯ Yes   ◯ No   ◯ Unknown

3a. Was a DNACPR order made in hospital?

◯ Yes   ◯ No   ◯ Unknown

3b. If answered "Yes" to [3a] then:
Date DNACPR order made

[   ]   ☐ Unknown

3c. If answered "Yes" to [3a] then:
Time DNACPR order made

[   ]   ☐ Unknown

3d. If answered "Yes" to [3a] then:
Was the DNACPR order agreed by a consultant?

◯ Yes   ◯ No   ◯ Unknown

---

4. Was a wider treatment escalation plan made in hospital?

◯ Yes   ◯ No   ◯ Unknown

5a. Was treatment limited at any stage?

◯ Yes   ◯ No   ◯ Unknown

5b. If answered "Yes" to [5a] then:
Please explain:

[   ]

5c. Was a decision made to withdraw life sustaining treatment?

◯ Yes   ◯ No   ◯ Unknown

5d. If answered "Yes" to [5c] then:
Which of the following contributed to treatment withdrawal?

☐ Pre-existing comorbidities   ☐ Pre-admission functional limitation
☐ Degree of (multi)organ failure   ☐ Predicted poor neurological outcome
☐ Poor cardiac function   ☐ Frailty
☐ Patient wishes   ☐ Family wishes
☐ Unknown

Please specify any additional options here...

[   ]

6a. In your opinion were decisions around escalation appropriate?

◯ Yes   ◯ No   ◯ Unable to answer

6b. Please expand (escalation)

1a. What was the discharge location?

○ Usual place of residence   ○ Transferred to another hospital
○ Discharged to another hospital   ○ Other residence (e.g. family member)
○ Residential home   ○ Nursing home
○ Rehabilitation unit
○ Not applicable patient died during this admission

If not listed above, please specify here...

[   ]

1b. What was the date of discharge or death?

[   ]   ☐ Unknown

1c. What was the time of discharge or death?

[   ]   ☐ Unknown

- -

2a. If answered "Usual place of residence", "Transferred to another hospital", "Discharged to another hospital" or "Other residence (e.g. family member)" to [1a] then:
Was the patient assessed by a heart rhythm specialist prior to discharge?

○ Yes   ○ No   ○ Unknown

2b. If answered "Yes" to [2a] then:
What was the outcome of the assessment?

[   ]

- -

3a. If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:
Was the patient assessed for physical and/or neurological rehabilitation?

☐ Physical rehabilitation   ☐ Neurological rehabilitation
☐ Neither   ☐ Not applicable, patient died in hospital
☐ Unknown

Please specify any additional options here...

[   ]

3b. If answered "Physical rehabilitation" to [3a] then:
Did the patient require physical rehabilitation?

○ Yes   ○ No   ○ Unknown

3c. If answered "Neurological rehabilitation" to [3a] then:
Did the patient require neurological rehabilitation?

○ Yes   ○ No   ○ Unknown

- -

4a. If answered "Usual place of residence", "Transferred to another hospital", "Discharged to another hospital" or "Other residence (e.g. family member)" to [1a] then:
Was any scale of functional outcome recorded in the notes prior to hospital discharge?

○ Yes   ○ No   ○ Not applicable

4b. **If answered "Usual place of residence", "Transferred to another hospital", "Discharged to another hospital", "Other residence (e.g. family member)", "Residential home", "Nursing home" or "Rehabilitation unit" to [1a] and "Yes" to [4a] then:**
Cerebral Performance Categories Scale if documented

- ○ CPC 1 Good Cerebral Performance (Normal Life)
- ○ CPC 2 Moderate Cerebral Disability (Disabled but Independent)
- ○ CPC 3 Severe Cerebral Disability (Conscious but Disabled and Dependent)
- ○ CPC 4 Coma/Vegetative State (Unconscious)
- ○ CPC 5 Brain Death
- ○ Other scale used

If not listed above, please specify here...

_____

5a. **If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:**
In your opinion was there room for improvement in the assessment of the patient's functional status/needs prior to discharge?

○ Yes   ○ No   ○ Unknown

5b. **If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:**
Please expand on your answer (discharge)

_____

6a. **If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:**
Was cardiac rehabilitation offered in the first three months from discharge?

○ Yes   ○ No
○ Not applicable patient died in hospital   ○ Unknown

6b. **If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:**
Was psychological review offered within the first six months from discharge?

○ Yes   ○ No
○ Not applicable patient died in hospital   ○ Unknown

6c. **If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:**
In your opinion was the follow that was arranged for this patient adequate?

○ Yes   ○ No   ○ Unknown

6d. If answered "Usual place of residence" or "Other residence (e.g. family member)" to [1a] then:
   Please expand on your answer (follow up)

```
[                                                          ]
```

Patients that died in hospital

7. If answered "Not applicable patient died during this admission" to [1a] then:
   What was the cause of death as it appeared on death certificate?

```
[                                                          ]
```

8a. If answered "Not applicable patient died during this admission" to [1a] then:
   Was organ donation considered?

○ Yes   ○ No   ○ Unknown

8b. If answered "Not applicable patient died during this admission" to [1a] then:
   Was a specialist nurse for organ donation (SNOD) involved?

○ Yes   ○ No   ○ Unknown

8c. If answered "Yes" to [8a] then:
   Did organ donation occur?

○ Yes   ○ No   ○ Unknown

8d. If answered "Not applicable patient died during this admission" to [1a] and "Yes" to [8c] then:
   Was this organ donation after

○ Brain death (DBD)   ○ Cardiac death (DCD)   ○ Unable to answer

8e. If answered "Yes" to [8c] and "Not applicable patient died during this admission" to [1a] then:
   If yes, which organs were donated?

```
[                                                          ]
```

9a. If answered "Not applicable patient died during this admission" to [1a] and "No" to [8a] then:
   In your opinion should organ donation have been considered?

○ Yes   ○ No   ○ Unknown

9b. If answered "Not applicable patient died during this admission" to [1a] and "Yes" to [9a] and "No" to [8a] then:
Please expand (organ)

1a. Overall quality of care

○ Good practice - A standard that you would expect from yourself, your trainees and your institution
○ Room for improvement – Aspects of CLINICAL care that could have been better
○ Room for improvement – Aspects of ORGANISATIONAL care that could have been better
○ Room for improvement – Aspects of CLINICAL AND ORGANISATIONAL care that could have been better
○ Less than satisfactory – SEVERAL ASPECTS OF CLINICAL AND/OR ORGANISATIONAL care that were well
○ Insufficient data

1b. Please provide reasons for assigning this grade

2. Cause for concern cases – occasionally NCEPOD will refer cases that have been identified as "less than satisfactory" when it is felt that further feedback to the Trust/Board concerned is warranted. This is usually due to an area of concern particular to the hospital or clinician involved, and not for issues highlighted across the body of case notes. This process has been agreed by the NCEPOD Steering group and the GMC. The medical director of the Trust/Board is written to by the Chief Executive of NCEPOD explaining our concerns. This process has been in operation for ten years and the responses received have always been positive in that they feel we are dealing with concerns in the most appropriate manner. Do you feel that this case should be considered for such action?

○ Yes   ○ No

3a. Are there any issues from this case that you feel should be highlighted in the report?

○ Yes   ○ No

3b. If answered "Yes" to [3a] then:
Please provide details (vignette)