



SEPSIS STUDY

National Confidential Enquiry into Patient Outcome and Death (NCEPOD)

CLINICIAN QUESTIONNAIRE

CONFIDENTIAL

DETAILS OF THE CLINICIAN COMPLETING THIS QUESTIONNAIRE

Grade: _____

Specialty: _____

What is this study about?

To identify and explore avoidable and remediable factors in the process of care for patients with sepsis.

Inclusions

Patients aged 16 years or older are included in the study if all of the following apply:

- 1) Admitted to ICU/HDU between 6th-20th May 2014 inclusive and identified as having sepsis within 48 hours of admission to ICU/HDU; or
- 2) Identified as having sepsis by the Critical Care Outreach Team (or equivalent) during the same time period.

Exclusions

- 1) Immunosuppressed neutropaenic patients on chemotherapy or immunosuppressant drugs for transplant programmes;
- 2) Pregnant women up to 6 weeks post-partum (covered by MBRRACE-UK sepsis study);
- 3) Patients on end of life care pathway at time of diagnosis or consultant-led decision made not to escalate (prior to entry into the study);
- 4) Patients who develop sepsis after 48 hours on ICU/HDU.

CPD accreditation:

Consultants who complete NCEPOD questionnaires make a valuable contribution to the investigation of patient care. It also provides an opportunity for consultants to review their clinical management and undertake a period of personal reflection. These activities have a continuing medical and professional development value for individual consultants. Consequently, NCEPOD recommends that consultants who complete NCEPOD questionnaires keep a record of this activity which can be included as evidence of internal/self directed Continuous Professional Development in their appraisal portfolio.

How to complete the form:

Information will be collected using two methods; box cross and free text, where your opinion will be requested.

This form will be electronically scanned. Please use a black or blue pen. Please complete all questions with either block capitals or a bold cross inside the boxes provided e.g.

Was a CV catheter placed?

- Yes
- No

If you make a mistake, please "black-out" the incorrect box and re-enter the correct information, e.g.

- Yes
- No

Questions or help?

If you have any queries about this study or this questionnaire, please contact

sepsis@ncepod.org.uk

Or telephone: 020 7251 9060

Thank you for taking the time to complete this questionnaire. The findings of the study will be published in autumn 2015.

If you (the clinician completing the questionnaire) would like email confirmation of the completion of this questionnaire for your records, please clearly supply your email address below.

NCEPOD number:



CODES FOR SPECIALTY

SURGICAL SPECIALTIES

100 = General Surgery	107 = Vascular Surgery	161 = Burns Care
101 = Urology	110 = Trauma & Orthopaedics	170 = Cardiothoracic Surgery
103 = Breast Surgery	120 = Ear, Nose & Throat (ENT)	172 = Cardiac Surgery
104 = Colorectal Surgery	130 = Ophthalmology	173 = Thoracic Surgery
105 = Hepatobiliary & Pancreatic Surgery	140 = Oral Surgery	180 = Accident & Emergency
106 = Upper Gastrointestinal Surgery	145 = Maxillo-Facial Surgery	190 = Anaesthetics
	150 = Neurosurgery	192 = Critical/Intensive Care Medicine
	160 = Plastic Surgery	

MEDICAL SPECIALTIES

300 = General Medicine	326 = Acute internal medicine	410 = Rheumatology
301 = Gastroenterology	330 = Dermatology	430 = Geriatric Medicine
302 = Endocrinology	340 = Respiratory Medicine	500 = Obstetrics & Gynaecology
303 = Clinical Haematology	350 = Infectious Diseases	501 = Obstetrics
306 = Hepatology	352 = Tropical Medicine	502 = Gynaecology
307 = Diabetic Medicine	360 = Genito-Urinary Medicine	800 = Clinical Oncology
314 = Rehabilitation	361 = Nephrology	810 = Radiology
315 = Palliative Medicine	370 = Medical Oncology	820 = General Pathology
320 = Cardiology	400 = Neurology	823 = Haematology

CODES FOR GRADE

01 – Consultant	02 – Staff grade/Associate specialist
03 – Trainee with CCT	04 – Senior specialist trainee (ST3+ or equivalent)
05 – Junior specialist trainee (ST1&ST2 or CT equivalent)	06 – Basic grade (HO/FY1 or SHO/FY2 or equivalent)
07 - Specialist Nurse (Nurse consultant, Nurse practitioner, clinical nurse specialist)	08 - Senior staff nurse, enrolled nurse (EN) etc)
09 - 1st Level nurse, staff nurse (RGN)	10 - Non-registered staff (HCA etc.)

DEFINITIONS

Functional status ranking	Slight disability: generally able to carry out activities unaided but may require assistance with certain tasks; moderate disability: Requiring some help but able to walk without assistance; moderate to severe disability: Unable to walk without assistance and unable to attend to own bodily needs without assistance; severe disability: Bedridden, incontinent and requiring constant nursing care and attention.
CCOT, MET, RRT etc	Critical Care Outreach, Medical Emergency, Rapid Response Teams: Specialised clinical teams on hand on general/acute wards to deliver emergency or critical care to patients that become acutely unwell.
Levels of ward care	Level 1: Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care whose needs can be met on an acute ward with additional advice and support from the critical care team. Level 2: (e.g. HDU) Patients requiring more detailed observation or intervention including support for a single failing organ system or post operative care, and those stepping down from higher levels of care. (NB: When Basic Respiratory and Basic Cardiovascular support are provided at the same time during the same critical care spell and no other organ support is required, the care is considered to be Level 2 care). Level 3: (e.g. ICU) Patients requiring advanced respiratory support alone or basic respiratory support together with support of at least two organs. This level includes all complex patients requiring support for multi-organ failure. (NB: Basic Respiratory and Basic Cardiovascular do not count as 2 organs if they occur simultaneously (see above under Level 2 care), but will count as Level 3 if another organ is supported at the same time).
Post-sepsis syndrome	Insomnia, difficulty getting to sleep or staying asleep; nightmares, vivid hallucinations and panic attacks; disabling muscle and joint pains, extreme fatigue, poor concentration; decreased mental (cognitive) functioning.
Sepsis, severe sepsis	For the purposes of this study, sepsis is defined as for the surviving sepsis guidelines campaign, as: suspected/documentated infection plus modified SIRS criteria*; severe sepsis is the above plus documented organ dysfunction* <i>*please see Appendix 1 on the back page for detailed criteria.</i>



TIMEFRAME - QUESTIONNAIRES SHOULD BE COMPLETED FOR THE 1ST ADMISSION RELATING TO THE STUDY PERIOD 6th - 20th MAY 2014 INCLUSIVE

A. CASE SUMMARY

1. Please use the box below to provide a brief summary of this case, adding any additional comments or information you feel relevant. Please write clearly for the benefit of the case reviewers. You may also write or type on a separate sheet.

NCEPOD attaches great importance to this summary. Please give as much information as possible about the care of this patient.

B. PATIENT DETAILS

2. Age (on day 1 of first hospital admission during the study period) years
3. Gender Male Female
4. Height cm **OR** feet inches Unknown
5. Weight kgs **OR** st lb Unknown
6. BMI Unknown
7. Did the patient have any co-morbid conditions on admission? Yes No Unknown
8. If YES, please select all that apply:
- | | | |
|--|---|--|
| <input type="checkbox"/> Myocardial infarction | <input type="checkbox"/> Congestive heart failure | <input type="checkbox"/> Peripheral vascular disease |
| <input type="checkbox"/> Cerebrovascular disease | <input type="checkbox"/> Pulmonary embolism/DVT | <input type="checkbox"/> Hypertension |
| <input type="checkbox"/> Dementia | <input type="checkbox"/> Permanent neurological deficit | <input type="checkbox"/> Mental health diagnosis |
| <input type="checkbox"/> Hemiplegia | <input type="checkbox"/> Connective tissue disease | |





- Chronic lung disease Peptic ulcer disease HIV/AIDS
 Diabetes mellitus Type 1 Diabetes mellitus Type 2 Diabetes with end organ damage
 Moderate or severe chronic kidney disease Substance abuse Alcohol
 Chronic liver disease Moderate or severe liver disease
 Solid tumour Disseminated cancer Malignant lymphoma Leukaemia
 Trauma Burns Other (Please state):

9. What was the smoking history of this patient?

- Current smoker Ex-smoker (>5 years) Unknown
 Ex-smoker (<5 years) Never smoked

10a. Is there evidence that the patient has had a previous hospital admission with sepsis? Yes No

b. If YES, how long prior to the current admission did the most recent admission occur?

- Unknown <1month 1-6 months >6 months-1 year >1 year

11. If there were multiple admissions with sepsis, please state how many: Unknown

12. Please select the most appropriate description for this patient:

- A patient who developed the infection that led to the episode of sepsis prior to admission to hospital
 A patient who acquired the infection and developed sepsis in hospital (no evidence of infection/sepsis prior to admission)

13a. Was this patient involved in any clinical trial relating to the management of sepsis (e.g. the ProMiSe trial)? Yes No Unknown

b. If YES, please state which one?

B. PRE- HOSPITAL ADMISSION

14a. What date (prior to admission) did the patient first show signs of infection?

- 20 Unknown N/A - infection developed in hospital
 d d m m y y y y Estimate Actual

b. What date (prior to admission) did the patient first develop sepsis?

- 20 Unknown N/A - sepsis developed in hospital
 d d m m y y y y Estimate Actual



Prior to this hospital admission, please note below, the relevant primary healthcare services the patient presented to in relation to their infection (tick all that apply and state date and time first presented in relation to this episode):

15.

- Not applicable- Patient did not see any primary care providers in relation to the current episode
- Not applicable- Patient acquired infection and/or developed sepsis following hospital admission

Primary care provider

Date: DD / MM / YYYY

Time (if available) HH : MM

24 hr clock

- | | | | | | | | |
|---|----------------------|----------------------|---|---------------------------------------|----------------------|----------------------|---------------------------------------|
| <input type="checkbox"/> GP | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |
| <input type="checkbox"/> Urgent care centre | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |
| <input type="checkbox"/> Community nurse | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |
| <input type="checkbox"/> 111 service | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |
| <input type="checkbox"/> Other out of hours service | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |
| <input type="checkbox"/> Other hospital ED | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |
| <input type="checkbox"/> This hospital ED: presentation did not lead to admission | <input type="text"/> | <input type="text"/> | <input type="text" value="2"/> <input type="text" value="0"/> | <input type="checkbox"/> Date unknown | <input type="text"/> | <input type="text"/> | <input type="checkbox"/> Time unknown |

Other (please state):

| | Date unknown | | | Time unknown |

16a. In your opinion, was there a delay in the patient being admitted to hospital? (this includes delays prior to arriving at hospital and in the Emergency Department if applicable) Yes No Unknown

b. If YES, how long was the delay? Estimate Actual Unknown
days hours

c. If YES to 16a, is there any evidence that the delay was due to (please select all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Patient failure to seek medical help quickly enough | <input type="checkbox"/> Other hospital Emergency Department: failure to recognise urgency/misdiagnosis |
| <input type="checkbox"/> GP: failure to recognise urgency/misdiagnosis | <input type="checkbox"/> This hospital Emergency Department: failure to recognise urgency/misdiagnosis |
| <input type="checkbox"/> Urgent care centre: failure to recognise urgency/misdiagnosis | <input type="checkbox"/> Ambulance control centre: failure to recognise urgency/misdiagnosis |
| <input type="checkbox"/> Community nurse: failure to recognise urgency/misdiagnosis | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> 111 service: failure to recognise urgency/misdiagnosis | |
| <input type="checkbox"/> Paramedic service: failure to recognise urgency/misdiagnosis | |
| <input type="checkbox"/> Other (please state): | |



35a. Was the presumed source of infection documented? Yes No Unknown
 Not applicable- patient acquired infection post admission

b. If YES, what was it recorded as?

36. What was the time/date of the first consultant review:
24 hr clock Time unknown Date unknown
h h m m d d m m y y y y

E. PATIENTS WHO ACQUIRED INFECTION DURING ADMISSION

Please answer Q37-40 if the patient acquired the infection that led to this episode of sepsis in hospital. If the patient was admitted to hospital with an infection and/ or sepsis, please proceed directly to Q41.

What was the documented source of infection?

37a. In your opinion, was the infection avoidable? Yes No Unknown

b. If YES, please expand upon your answer:

38a. Was sepsis diagnosed after an invasive procedure/surgery? Yes No Unknown

b. If YES, what was the procedure?

c. Please state the Time/ Date of the procedure 24 hr clock Time unknown Date unknown
h h m m d d m m y y y y

39. If YES to part 38a, was a surgical site infection prevention bundle adopted? Yes No Unknown

40. At the time sepsis was first diagnosed, how was it documented in the case notes?
 Sepsis Severe sepsis Septic shock
 Septicaemia ?Sepsis (suspected sepsis) Unknown

Other (please state):

F. IDENTIFICATION OF SEPSIS IN HOSPITAL (ALL PATIENTS)

41. What was the first time/date that the patient was documented as having sepsis?
24 hr clock Time unknown Date unknown
h h m m d d m m y y y y

42a. Was an early warning score used to alert the team to the initial diagnosis of sepsis? Yes No Unknown

b. If YES, i) which score was used and ii) what was the patient's score at the time sepsis was diagnosed? i. ii.

43a. Was a screening tool that is part of a sepsis protocol/care bundle used to make the diagnosis? Yes No Unknown

b. If YES, was this protocol/care bundle: National Local

44. Please state which protocol/care bundle was used:





48p. **Acute Lung Injury** PaO₂/FiO₂ < 250mmHg (33.3kPa) in the absence of pneumonia as infection source or PaO₂/FiO₂ < 200mmHg (26.7kPa) in the presence of pneumonia as infection source

mmHg

kPa

 Value unknown Date unknown

h h

m m

 Time unknown

24 hr clock

d d

m m

y y y y

49. At the time sepsis was first diagnosed (in hospital), please state each investigation that was requested, and the time/date it was completed:

a. Lactate

 Yes No Unknown Time/date as for Q48m

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

b. Blood gases

 Yes No Unknown

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

c. FBC with differential

 Yes No Unknown Time/date as for Q48h

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

d. CRP

 Yes No Unknown

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

e. Urea & electrolytes

 Yes No Unknown Time/date as for Q48h

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

f. Urine Analysis

 Yes No Unknown

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

g. Amylase

 Yes No Unknown Not applicable

h h m m

24 hr clock

d d m m y y y y

Time/date completed

 Time unknown Date unknown

50a. Were other markers used?

 Yes Nob. If YES, please list: Procalcitonin proAdenomedullin (proADM) Other (please state)



51. How frequent were the observations at the time sepsis was first diagnosed?

- Hourly (or more frequent)
 >1-2 hourly
 >2-4 hourly
 >4-6 hourly
 Unknown
 >6-12 hourly
 >12 hourly
 Other (please state)

52. Were any of the following methods used to investigate the source of sepsis?

a. **Chest x-ray** 24 hr clock
 Yes
 No
 Unknown
 Not applicable

	h h m m		d d m m	y y y y	
Time/date requested	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown
Time/date completed	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown

b. **CT scan (e.g. chest, abdomen, pelvis, renal tract) please state:**

Yes
 No
 Unknown
 Not applicable

	24 hr clock h h m m		d d m m	y y y y	
Time/date requested	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown
Time/date completed	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown

c. **Initial ultrasound (e.g. abdomen, KUB, pelvis)**
 Yes
 No
 Unknown
 Not applicable

	24 hr clock h h m m		d d m m	y y y y	
Time/date requested	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown
Time/date completed	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown

d. Was this a FAST scan in Emergency Department?
 Yes
 No
 Unknown

e. **MRI - please specify body part**
 Yes
 No
 Unknown
 Not applicable

	24 hr clock h h m m		d d m m	y y y y	
Time/date requested	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown
Time/date completed	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown

e. **Laprosopy**
 Yes
 No
 Unknown
 Not applicable

	24 hr clock h h m m		d d m m	y y y y	
Time/date requested	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown
Time/date completed	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown

f. **Laparotomy**
 Yes
 No
 Unknown
 Not applicable

	24 hr clock h h m m		d d m m	y y y y	
Time/date requested	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown
Time/date completed	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> Date unknown



52g. Other (please state): Yes No

24 hr clock

Time/date requested	h h	m m	<input type="checkbox"/> Time unknown	d d	m m	y y y y	<input type="checkbox"/> Date unknown
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	
Time/date completed	h h	m m	<input type="checkbox"/> Time unknown	d d	m m	y y y y	<input type="checkbox"/> Date unknown
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	

53a. In your opinion, were any investigations omitted/delayed? Yes No

b. If YES, please give details

54. What was the presumed source of infection (may be multiple answers)

<input type="checkbox"/> Lung: pneumonia, emphysema	<input type="checkbox"/> Urinary tract	<input type="checkbox"/> Acute abdominal/peritoneal/ascitic	<input type="checkbox"/> Skin/ soft tissue	<input type="checkbox"/> Bone/ joint
<input type="checkbox"/> Intracranial	<input type="checkbox"/> Spinal	<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Perianal/ ischio-rectal	
<input type="checkbox"/> Gynaecological/STI	<input type="checkbox"/> Blood stream (catheter)	<input type="checkbox"/> Blood only	<input type="checkbox"/> ENT	
<input type="checkbox"/> Post-operative - please state date of surgery	d d	m m	y y y y	<input type="checkbox"/> Date unknown
	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	
<input type="checkbox"/> Implantable device please specify:				
<input type="checkbox"/> Grafts/meshes - please specify:				
<input type="checkbox"/> Other infection - please specify:				
<input type="checkbox"/> None documented	<input type="checkbox"/> Source not found			

55a. Was this subsequently confirmed as being correct? Yes No Unknown Not Applicable

b. If YES, please state below the method and the date it was confirmed

	d d	m m	y y y y	<input type="checkbox"/> Date unknown
	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	
<input style="width: 350px; height: 20px;" type="text"/>	<input type="checkbox"/> Method unknown			

56a. Following diagnosis of sepsis, were blood cultures taken? Yes No Unknown

b. If YES, please state the time/date blood cultures were first collected/sent for analysis

	h h	m m	<input type="checkbox"/> Time unknown	d d	m m	y y y y	<input type="checkbox"/> Date unknown
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	

c. If YES to 56a, were blood cultures taken before antimicrobial treatment was administered in hospital? Yes No Unknown

d. If YES to 56a, please state the time/date the results were received?

	h h	m m	<input type="checkbox"/> Time unknown	d d	m m	y y y y	<input type="checkbox"/> Date unknown
	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	

e. Were other culture samples sent? (If YES please mark all that apply and write the date/time requested: Yes No Unknown

	h h	m m	<input type="checkbox"/> Time unknown	d d	m m	y y y y	<input type="checkbox"/> Date unknown
<input type="checkbox"/> Ascitic fluid	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	
<input type="checkbox"/> Urine	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="4"/>	<input type="checkbox"/> Date unknown



<input type="checkbox"/>	56e continued.	Time requested		Date requested	
<input type="checkbox"/>	CSF	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown
<input type="checkbox"/>	Tissue biopsy	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown
<input type="checkbox"/>	Throat swab	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown
<input type="checkbox"/>	Sputum sample	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown
<input type="checkbox"/>	Bronchoalveolar lavage	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown
<input type="checkbox"/>	Wound swab	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown
<input type="checkbox"/>	Other body fluid (please state):	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> Date unknown

57a. In your opinion, were there any delays in obtaining the blood (or other) culture results? Yes No Unknown Not applicable

b. If YES, please give details:

G. EARLY MANAGEMENT OF SEPSIS

58. What time/date was the first dose of antimicrobial prescribed?

h h	m m	d d	m m	y y y y
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

N/A- not prescribed Time unknown Date unknown

59. What time/date was first dose of antimicrobial administered?

h h	m m	d d	m m	y y y y
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

N/A- not administered Time unknown Date unknown

60. Please state the grade and specialty of doctor or nurse (using codes on page 2) who

i) prescribed and ii) administered the antimicrobial?

	Grade code		Specialty code	
i) Prescribed by:	<input type="text"/>	<input type="checkbox"/> Unknown	<input type="text"/>	<input type="checkbox"/> N/A- not prescribed
ii) Administered by:	<input type="text"/>	<input type="checkbox"/> Unknown	<input type="text"/>	<input type="checkbox"/> N/A- not administered

61. How was the choice of first antimicrobial made (multiple answers may apply)

<input type="checkbox"/> Compliant with hospital antimicrobial prescribing policy/protocol	<input type="checkbox"/> Discussion with microbiologist/infectious disease specialist
<input type="checkbox"/> Local broad spectrum antimicrobial guidance	<input type="checkbox"/> Unknown
<input type="checkbox"/> Based on previous culture results for this patient	
<input type="checkbox"/> The discretion of the treating doctor	
<input type="checkbox"/> Other (please state):	<div style="border: 1px solid black; width: 500px; height: 20px;"></div>

62. If not according to your hospital policy, please explain why:



63. Were the following documented in the patient's medical records?

a. The indication for antimicrobial treatment including the suspected focus of infection Yes No

b. The chosen antimicrobial regimen including:

i) Name of antimicrobial(s) (please state): Yes No

ii) Dose Yes No

iii) Route(s) of admission Yes No

iv) Anticipated duration of antimicrobial treatment Yes No

v) Consideration of allergies/drug interactions Yes No

64a. Was the case discussed with a microbiologist/infectious disease specialist? Yes No Unknown

b. If YES, please write the time and date of the discussion:

<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Date unknown
h h	m m	24 hr clock	d d	m m	2	0	1	4
					y	y	y	y

c. If YES, was the initial choice of antimicrobial/regimen modified in light of this discussion? Yes No Unknown

d. If YES, please expand on your answer:

65a. Was the source of sepsis amenable to immediate source control? Yes No Unknown

b. If YES, when did source control intervention take place?

<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Date unknown
h h	m m	24 hr clock	d d	m m	2	0	1	4
					y	y	y	y

66a. What was the procedure? Surgical Radiological Intervention Endoscopic

Other (please state):

67. Were there any: a. infected intravascular devices Yes No Unknown

b. Other contaminated devices or implants (please state): Yes No Unknown

c. If YES to 67a or b, please state time/date of removal of device:

<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Date unknown
h h	m m	24 hr clock	d d	m m	2	0	1	4
					y	y	y	y

68. Did source control result in an improvement in clinical status? Yes No Unknown

Initial Fluid Management

69a. Did the patient have hypotension or lactate >4 during the episode? Yes No Unknown

b. If YES, did they need fluids? Yes No Unknown





69c. If YES, please state which fluids received, the initial amount and the date first received: **Answers may be multiple**

Fluid type	Amount (mLs)	h h	m m	Time unknown	d d	m m	y y y y	Date unknown
<input type="checkbox"/> Crystalloids	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> mL	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> 2 <input type="text"/> 0 <input type="text"/> 1 <input type="text"/> 4	<input type="checkbox"/>
<input type="checkbox"/> Synthetic colloids	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> mL	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> 2 <input type="text"/> 0 <input type="text"/> 1 <input type="text"/> 4	<input type="checkbox"/>
<input type="checkbox"/> Other (please state)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> mL	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> 2 <input type="text"/> 0 <input type="text"/> 1 <input type="text"/> 4	<input type="checkbox"/>
<input type="text"/>	<input type="checkbox"/> Unknown							

70a. If YES to 69a, did patient respond to the initial fluid challenge? Yes No Unknown

b. Was this a partial response? (bp/lactate improved but did not normalise) Yes No Unknown

c. Was a fluid balance chart initiated? Yes No Unknown

d. Was a catheter placed? Already in situ Yes No Unknown

e. If YES to 70d, please state the time and date placed:

<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> 2 <input type="text"/> 0 <input type="text"/> 1 <input type="text"/> 4	<input type="checkbox"/> Date unknown
h h	m m	24 hr clock	d d	m m	y y y y	

71a. Were further fluid challenges deemed necessary? Yes No Unknown

b. If YES, did the patient receive further:

Crystalloids Synthetic colloids Other fluids (please state):

72. If YES to 71a, did the patient respond to further fluid challenges with normalisation of bp and lactate? Yes No Unknown

73a. Were vasopressors commenced during the initial resuscitation? Yes No Unknown

b. If YES, please state the time and date:

<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/> Time unknown	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> 2 <input type="text"/> 0 <input type="text"/> 1 <input type="text"/> 4	<input type="checkbox"/> Date unknown
h h	m m	24 hr clock	d d	m m	y y y y	

c. If YES to Q73a, did the patient respond to vasopressors and fluids with normalisation of bp and lactate? Yes No Unknown

74a. Was an attempt made to determine oxygen delivery or cardiac output? Yes No

b. If YES, was this using (answers may be multiple):

- | | |
|---|--|
| <input type="checkbox"/> Central venous oxygen saturation (ScvO2) | <input type="checkbox"/> Cardiac output measurement using pulse contour analysis |
| <input type="checkbox"/> Cardiac output measurement using oesophageal Doppler techniques | <input type="checkbox"/> Cardiac output measurement using echocardiography |
| <input type="checkbox"/> Cardiac output measurement using non-invasive Doppler techniques | <input type="checkbox"/> Dynamic ultrasound assessment of central veins |
| <input type="checkbox"/> Cardiac output measurement using dilution techniques | <input type="checkbox"/> Lactate clearance |

Other (please state):





75a. Did any of the methods in Q74b indicate a failure of oxygen delivery or low cardiac output? Yes No

b. If YES, please indicate which:

c. If YES to 76a, what was the location of the patient at this time? ED Level 2 Other (please state)
 General ward Level 3

76a. Was the patient escalated to centrally delivered inotropes? Yes No

b. If YES, please state the time and date:

Time unknown Date unknown
 h h m m 24 hr clock d d m m y y y y

77a. Was the patient anaemic? Yes No Unknown

b. If YES, what was their haemoglobin at the beginning of resuscitation? g/L

78. Did they receive a blood transfusion? Yes No Unknown

79. What was the patient's level of care during initial resuscitation? Level 1 Level 2 Level 3 (see p.2 for definitions)

80. What was their frequency of monitoring at this time? Hourly or more frequent >1 to 2 hourly >2 to 4 hourly
 >4 to 6 hourly >6 to 12 hourly >12hourly - daily less frequent than daily
 Other (please state): Unknown
 None

81. Please state any other initial management steps that were undertaken:

82. Is there evidence of a structured handover from the day team and out-of-hours team treating this patient? Yes Not applicable- care was not handed over
 No

83a. Was this patient placed on a formal end of life care pathway at any time during this admission? Yes No Unknown

b. If YES, was there documented discussion with the family? Yes No Unknown N/A

H. ESCALATION

84. Following diagnosis with sepsis, what was the time/date the patient was first reviewed by a medical doctor or specialist nurse (on the ward)?

Time unknown Date unknown
 h h m m 24 hr clock d d m m y y y y

85a. What was the grade of the clinician? (see p.2 for list of grades)

b. Following diagnosis with sepsis, (if different from above) what was the first time the patient was reviewed by a consultant?

Time unknown Date unknown
 h h m m 24 hr clock d d m m y y y y Time/date as above (Q84)





86. Following diagnosis with sepsis, (if different from above) what was the first time the patient was reviewed by a consultant intensivist?

- Time/date as above (Q84/85)
- N/A - Not reviewed
- Date unknown

Time unknown
 h h m m 24 hr clock d d m m y y y y

87. Following diagnosis with sepsis, how often were patients monitored for standard observations?

- Hourly or more frequent
- >1 to 2 hourly
- >2 to 4 hourly
- >4 to 6 hourly
- >6 to 12 hourly
- >12hourly - daily
- Other (please state):
- Unknown
- Less frequent than daily

88a. Did patient observations include monitoring with an Early Warning Score? Yes No

b. If YES, please specify which one:

c. If YES, was this linked to trigger an escalation protocol? Yes No

d. If YES, which Early Warning Score normally triggers escalation in this hospital/ward : Unknown

e. If YES to 88a, was escalation triggered for this patient? Yes No

f. If YES, what Early Warning Score triggered escalation in this patient Unknown

g. If YES to question 88e, when was escalation triggered?

Time unknown Date unknown
 h h m m 24 hr clock d d m m y y y y

h. If Yes to 88e, what escalation was triggered? Review by critical care outreach team (CCOT)

- Review by other emergency team eg: Medical Emergency Team (MET), Rapid Response Team (RRT)
- Review by critical care clinician
- Review by other clinician

Other (please state):

89a. At any time, following diagnosis with sepsis, was this patient seen by the CCOT or other emergency team (MET, RRT etc.)? Yes No

b. If YES, please state the time/date the patient was first seen: Time/date as indicated in Q88g

Time unknown Date unknown
 h h m m 24 hr clock d d m m y y y y

c. If NO to 89a, was this because: Not required Patient admitted directly to critical care

- CCOT (or equivalent) not available out of hours
- No CCOT (or equivalent) at this hospital

CCOT (or equivalent) did not see patient for other reason - please state:



J. COMPLICATIONS

- 97a. Did the patient have any complications of sepsis during the admission? Yes No Unknown
- b. If YES, please state if they had any of the following complications during the admission? (Answers may be multiple)
- Amputation (please state site): Yes No Unknown
- Kidney injury Yes No Unknown
- Chronic pain Yes No Unknown
- Cognitive deficit Yes No Unknown
- Memory loss Yes No Unknown
- Fatigue Yes No Unknown
- Post traumatic stress disorder Yes No Unknown
- Post-sepsis syndrome Yes No Unknown **Please see definitions on page 2**
- Other (please state) Yes No Unknown

K. DISCHARGE / FOLLOW-UP

98. What was the date of discharge/death? Not applicable - still an inpatient 30 days following diagnosis of sepsis
d d m m y y y y
99. What was the final primary diagnosis at discharge/death (or at 30 days following diagnosis of sepsis if still an inpatient)?

If the patient died during this admission, please answer Q100-102, if the patient was discharged alive/alive at 30 days following diagnosis with sepsis, please proceed directly to question 103.

- 100a. In your opinion, was this death preventable? Yes No Unknown
- b. If YES, please expand:

- 101a. Was sepsis documented as contributing to the cause of death? Yes No Unknown
- b. If YES, how was it documented on the death certificate?

- 102a. Was the case discussed at an Mortality & Morbidity (M&M) meeting? Yes No Unknown
- b. If NO, why not?

If the patient was alive at discharge/ 30 days following diagnosis with sepsis, please answer Q103-107, if the patient died, please proceed directly to question 108.



103. What was the functional status of the patient at discharge/30 days from diagnosis from sepsis? No disability Slight disability Moderate disability
 Unknown Moderate/severe disability Severe disability N/A - still an inpatient

104. What was the discharge destination?
 Place of residence Residential home Nursing home
 Other hospital Rehabilitation hospital N/A - still an inpatient
 Other (please state): Unknown

105a. Was sepsis mentioned on the discharge summary? Yes No Unknown-discharge summary not available N/A - still an inpatient

b. If YES how was it recorded? Sepsis Septicaemia ?Sepsis Severe sepsis
 Other (please state): Unknown Septic shock

106a. Was a rehabilitation plan made for this patient? Yes No N/A - not required Unknown

b. If YES, what did it include? Referral to physiotherapy Referral to rehabilitation specialist Referral to psychology
 Referral to occupational therapy Other referral (please state):

d. Did the patient have any of the following complications at discharge? **(Answers may be multiple)**
 Cognitive deficit Memory loss Post traumatic stress disorder (PTSD) Post sepsis syndrome
 Amputation Chronic pain Fatigue Kidney injury **Please see definitions on page 2**
 Other (please state): Unknown

e. If YES, in your opinion, could they have been prevented at any stage of the care of this patient? Yes No Unknown

f. If YES, please expand upon your answer:

107a. Did the patient require re-admission to hospital? Yes No Unknown

b. If YES, was this due to: Re-infection Secondary infection Secondary complication(s) of episode of sepsis
 Other - please state

108. Please provide any further comments relating to this case. With the benefit of hindsight, is there anything, in your opinion, that should have been done differently? Was this related to clinical or organisational aspects of care? (N.B. please continue your answer using the box on the following page if more space is required)

Thank you for taking the time to complete this questionnaire.



Continuation of Q108:

[Empty rectangular box for continuation of Q108]



Appendix 1.

a) Modified SIRS Criteria- Diagnostic for Sepsis: Infection, documented or suspected, and more than one of the following:

- Fever ($> 38.3^{\circ}\text{C}$)/Hypothermia (core temperature $< 36^{\circ}\text{C}$)
- Heart rate $> 90/\text{min}^{-1}$ or more than two sd above the normal value for age
- Tachypnea (RR >20 breaths/minute)
- Acutely altered mental status
- Arterial hypotension (SBP < 90 mm Hg, MAP < 70 mm Hg, or an SBP decrease > 40 mm Hg in adults or less than two sd below normal for age)
- Hyperglycaemia (plasma glucose > 140 mg/dL or 7.7 mmol/L) in the absence of diabetes
- Leukocytosis (WBC count $> 12,000 \mu\text{L}^{-1}$) or Leukopenia (WBC count $< 4000 \mu\text{L}^{-1}$) (or normal WBC count with $>10\%$ immature forms)
- Significant oedema or positive fluid balance (> 20 mL/kg over 24 hr)
- Plasma C-reactive protein more than two sd above the normal value
- Plasma procalcitonin more than two sd above the normal value
- Arterial hypoxemia (Pao₂/Fio₂ < 300)
- Acute oliguria (urine output < 0.5 mL/kg/hr for at least 2 hrs despite adequate fluid resuscitation)
- Creatinine increase > 0.5 mg/dL or $44.2 \mu\text{mol/L}$
- Coagulation abnormalities (INR > 1.5 or aPTT > 60 s)
- Ileus (absent bowel sounds)
- Thrombocytopenia (platelet count $< 100,000 \mu\text{L}^{-1}$)
- Hyperbilirubinemia (plasma total bilirubin > 4 mg/dL or $70 \mu\text{mol/L}$)
- Hyperlactatemia (> 1 mmol/L)
- Decreased capillary refill or mottling

(WBC = white blood cell) Adapted from: Signs & symptoms of infection highlighted in Surviving Sepsis Campaign Sepsis Screening Tool: <http://www.survivingsepsis.org/SiteCollectionDocuments/ScreeningTool.pdf> and R. Phillip Dellinger, MD; Mitchell M. Levy, MD; Andrew Rhodes, MB BS; et al: 2001 Surviving Sepsis Campaign: International Guidelines for Management of Severe Sepsis and Septic Shock: 2012 Critical Care Medicine Journal, February 2013; 41(2)pp580-637

b) Severe sepsis definition = sepsis-induced tissue hypoperfusion or organ dysfunction (any of the following thought to be due to the infection)

- Sepsis-induced hypotension
- Lactate above upper limits laboratory normal
- Urine output < 0.5 mL/kg/hr for more than 2 hrs despite adequate fluid resuscitation
- Acute lung injury with Pao₂/Fio₂ < 250 in the absence of pneumonia as infection source
- Acute lung injury with Pao₂/Fio₂ < 200 in the presence of pneumonia as infection source
- Creatinine > 2.0 mg/dL ($176.8 \mu\text{mol/L}$)
- Bilirubin > 2 mg/dL ($34.2 \mu\text{mol/L}$)
- Platelet count $< 100,000 \mu\text{L}$
- Coagulopathy (international normalized ratio > 1.5)

Adapted from Levy MM, Fink MP, Marshall JC, et al: 2001 SCCM/ESICM/ACCP/ATS/SIS International Sepsis Definitions Conference. Crit Care Med 2003; 31:1250–1256.



Funding for this study was provided by The Healthcare Quality Improvement Partnership (HQIP) as part of The Clinical Outcome Review Programme into medical and surgical care.

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