SEPSIS STUDY

National Confidential Enquiry into Patient Outcome and Death (NCEPOD)
Advisor Assessment Form (AAF)

NCEPOD questionnaire number ☐☐☐☐☐☐

INSTRUCTIONS FOR COMPLETION

Please complete all questions with either block capitals or a bold cross inside the boxes provided. If you make a mistake, please "black-out" the box and re-enter the correct information. Unless indicated, please mark only one box per question.

For the purposes of the study, sepsis is defined according to thr surviving sepsis guidelines.....severe sepsis is defined as.....sepsis syndrome is.....

A. PATIENT DETAILS

1. Age at time of admission ☐☐☐ years

2. Gender ☐ Male ☐ Female

3. Weight ☐☐☐ kg OR ☐☐ st ☐☐ lb ☐ Not recorded

4. Height ☐☐☐ cm OR ☐ ft ☐☐ in ☐ Not recorded

5. BMI ☐☐ ☐ Not recorded

6. Mode of admission to hospital

- ☐ Admission via Emergency department- via ambulance/HEMS
- ☐ Admission via Emergency Department- GP referral
- ☐ Transfer as inpatient from other hospital
- ☐ Admission via Emergency Department: referred from out of hours /111/ telephone referral
- ☐ Admission via Emergency Department- Self presented to A&E
- ☐ Unable to answer
- ☐ GP referral direct to ward
- ☐ Other (please state)
- ☐ Admitted from outpatient appointment

7a. If a transfer and in patientfrom another hospital, please answer questions 7-9:

b. Was the transfer documentation/referral letter included in the case notes? ☐ Yes ☐ No

c. If YES, in your opinion, did it contain all necessary information? ☐ Yes ☐ No

d. If NO, what was missing?

8. Was the patient documented as having "sepsis" in transfer documentation/referral letter? ☐ Yes ☐ No ☐ N/A - no evidence to suggest patient had sepsis on transfer

9a. In your opinion was the transfer delayed? ☐ Yes ☐ No

b. If YES, what reason (s)? (please mark all that apply)

- ☐ Bed availability in receiving hospital
- ☐ Delayed referral-delayed diagnosis in referring hopsital
- ☐ Transport
- ☐ Lack of weekend/out of hours cover
- ☐ Staff shortage
- ☐ Other (please state)

c. If YES, in your opinion did it affect the outcome? ☐ Yes ☐ No ☐ Insufficient data

10. What type of admission was this? ☐ Elective ☐ Emergency

11. In your opinion, did this patient have:

- ☐ A- evidence of infection on admission to hospital
- ☐ B- Evidence of sepsis on admission to hospital
- ☐ C- No evidence of infection or sepsis on admission to hospital

If answered A or B, please continue to Q12,

If answered C, in your opinion, did any of the pre-hospital /ED care of this patient contribute to the development of infection / sepsis in this case? ☐ Yes ☐ No

If YES, please continue to question 12, if NO, please proceed to question 27

B. PRE- HOSPITAL ADMISSION

12.

PRIOR TO HOSPTIAL ADMISSION, please state if there was evidence of the following (i-ix), for PART A, as documented in the notes (using the specified term in each case), and for PART B, in your opinion based on signs/symptoms displayed by the patient. If available, please also state for each, the date first occured.

	A) As documented in the notes			**B) In your opinion**		
		d d m m yyyy	NR		d d m m yyyy	NR
i) Infection	☐ Yes ☐ No			☐ Yes ☐ No		
ii) Sepsis	☐ Yes ☐ No			☐ Yes ☐ No		
iii) Severe sepsis	☐ Yes ☐ No			☐ Yes ☐ No		
iv) Septic shock	☐ Yes ☐ No			☐ Yes ☐ No		

13. Prior to hospital admission, please indicate in part (a) if the following healthcare professionals assessed the patient (relating to the current episode) and note your opinion on the following questions (b-d) around the diagnosis:

☐ **NA- Not assessed in primary care** ☐ **Not recorded**

a. Assessed by: Answers may be multiple	**b. Was the diagnosis of sepsis missed?**	**c. Did the healthcare professional making the assessment underestimate the severtity of the condition?**	**d. Was there a missed opportunity to refer the patient earlier?**
☐ **General Practitioner?**	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer
☐ **Out of hours GP/Urgent care service?**	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer
☐ **111 service/ telephone consultation?**	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer
☐ **Paramedic/ ECA**	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer
☐ **Other primary care clinician? (please state):**	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer	☐ Yes ☐ No ☐ Unable to answer

14a. If YES to any of the questions for 13b, c, d, in your opinion, did this affect the outcome? ☐ Yes ☐ No ☐ Not recorded

b. If YES please expand on your answer:

15. Time and date of most recent visit to GP: ☐ Not applicable - no visit documented (proceed directly to Q18)

Date ☐☐ ☐☐ ☐☐ (d d m m y y) ☐ Not recorded Time ☐☐ ☐☐ (h h m m, 24 hour clock) ☐ Not recorded

16a. Was a pre alert sent to the admitting hospital? ☐ Yes ☐ No ☐ Not recorded

b. If YES, in what form was this: (please select all that apply) ☐ GP letter ☐ GP telephone call ☐ Other (please state)

17a. Is the GP referral letter included in the notes? ☐ Yes ☐ No ☐ Not applicable

b. If YES, in your opinion, does it include all relevant information? ☐ Yes ☐ No ☐ Unknown

c. If NO, what is missing? (please select all that apply)

☐ Other (please state) ☐ Date of consultation ☐ Time of consultation ☐ Sufficiently detailed past medical history ☐ Sufficiently detailed history of current complaint

☐ Details of medications ☐ Details of allergies ☐ Details of treatment etc.

18a. Are there any records of pre-hospital vital signs? ☐ Yes ☐ No ☐ Unknown

b. If YES, please state which healthcare professionals assessed pre-hospital vital signs and for each, state what was included, the date/time taken and the results

	i) General Practitioner	ii) Practice nurse	iii) Paramedic	iv) Other primary care practitioner (please state):	v) Appropriate?
	d d m m y y NR	d d m m y y NR	d d m m y y NR	d d m m y y NR	
	Result NR	Result NR	Result NR	Result Not recorded	Y N ID
Temperature (C)	.	.	.	.	
Blood pressure	/	/	/	/	
Heart rate					
Respiratory rate					
AVPU scale					
Change in mental status noted					
Blood Glucose					

19a. Had any treatment been commenced prior to arrival in the hospital? ☐ Yes ☐ No ☐ Unknown ☐ Not applicable

b. If YES, please mark all included and who administered treatment? **Answers may be multiple**	i) General Practitioner	ii) Practice nurse	iii) Paramedic	iv) Other primary care practitioner (please state):	v) Appropriate?
	Y N ID	Y N ID	Y N ID	Y N ID	Y N ID
Fluids	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Oxygen	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Antimicrobials	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Other (please state)	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐

c. If NO to any of part v, please expand on your answer below:

20a. In your opinion is there any room for improvement regarding the patient's management prior to admission to the hospital? ☐ Yes ☐ No ☐ Unknown

b. If YES, please state which area: ☐ General Practitioner ☐ Practice nurse ☐ Paramedic ☐ Other primary care practitioner

Other (please state):

c. If YES, please expand on your answer, stating what could have been improved:

d. If YES to part A, in your opinion did this affect the outcome? ☐ Yes ☐ No ☐ Unknown

C. TRIAGE / FIRST ASSESSMENT IN HOSPITAL

21. Was the patient admitted to hospital via the emergency department (ED)? ☐ Yes ☐ No ☐ Unknown

22. If NO, please proceed directly to Q27, If YES, ON ASSESSMENT IN THE EMERGENCY DEPARTMENT, please state if there was evidence of the following (i-ix), for PART A, as documented in the notes (using the specified term in each case), and for PART B, in your opinion based on signs/symptoms displayed by the patient. If available, please also state for each, the date first occured.

	A) As documented in the notes			**B) In your opinion**		
		d d m m yyyy	NR		d d m m yyyy	NR
i) Infection	☐ Yes ☐ No			☐ Yes ☐ No		
ii) Sepsis	☐ Yes ☐ No			☐ Yes ☐ No		
iii) Severe sepsis	☐ Yes ☐ No			☐ Yes ☐ No		
iv) Septic shock	☐ Yes ☐ No			☐ Yes ☐ No		

23. Please answer both parts to Q21, part A concerning TRIAGE assessment in the ED and part B concerning the the first assessment after triage by a senior clinician (ST3+) in the Emergency Department

23.	**a. TRIAGE in ED**	**b. First assessment by senior clinician in ED after TRIAGE**
i. Was there a delay in the patient being assessed?	☐ Yes ☐ No ☐ Insufficient data	☐ Yes ☐ No ☐ insufficient data
ii. What was the reason for the delay?	☐ Insufficient data	☐ Insufficient data
iv. What was the grade of the clinician (nurse/doctor) that assessed the patient and was it appropriate?	☐ NR ☐ Yes ☐ No ☐ Insufficient data	☐ NR ☐ Yes ☐ No ☐ Insufficient data
v. Which of the following were taken at triage and/or during the first assessment on the ward and what were the results)	☐ Temperature (C) ☐☐☐.☐ ☐ Blood pressure ☐☐☐ / ☐☐ ☐ Heart rate ☐☐☐ ☐ Respiratory rate ☐☐☐ ☐ Glasgow coma score/ AVPU scale ☐☐ / ☐ ☐ Change in mental status noted ☐ Blood glucose ☐☐	☐ Temperature (C) ☐☐☐.☐ ☐ Blood pressure ☐☐☐ / ☐☐ ☐ Heart rate ☐☐☐ ☐ Respiratory rate ☐☐☐ ☐ Glasgow coma score/ AVPU scale ☐☐ / ☐ ☐ Change in mental status noted ☐ Blood glucose ☐☐

continued overleaf...

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23.	a. TRIAGE in ED	b. First assessment in ED (after triage)
x.	Was the likely source of infection documented? ☐ Yes ☐ No ☐ Insufficient data	☐ Yes ☐ No ☐ Insufficient data
xi.	If NO, in your opinion, should it have been noted at this time point? ☐ Yes ☐ No ☐ Insufficient data	☐ Yes ☐ No ☐ Insufficient data

24a. In relation to this epsiode of sepsis, is there any evidence that the patient previously presented to:
- i. This hospital ED ☐ Yes ☐ No ☐ ID
- ii. Another hospital ED ☐ Yes ☐ No ☐ ID

b. If YES to part 'i' or 'ii', is there evidence that the diagnosis of sepsis was missed? ☐ Yes ☐ No ☐ ID

25. Was there room for improvement in the following aspects of the initial assessment?

a. Recording of past medical history ☐ Yes ☐ No ☐ ID

b. Investigations requested ☐ Yes ☐ No ☐ ID

c. Treatment plan ☐ Yes ☐ No ☐ Unknown If YES, what is missing? ☐ Oxygen ☐ Fluids ☐ Anti-microbials
Other (please state) ☐

d. Monitoring plan ☐ Yes ☐ No ☐ Unknown If YES, what is missing? ☐ Urine output ☐ EWS
Other (please state) ☐

26. As part of the initial assessment, please state which investigations were present/ incomplete/missing/ delayed?

Vital signs	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Blood cultures	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Other tissue/fluid cultures	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Full blood count	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
U&E	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Blood gases	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Amylase	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Glucose	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
LFTs	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Lactate	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Coagulation screen	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
CT scan	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Chest X ray	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID
Other (please state):	☐ Present	☐ Missing	☐ Incomplete	☐ Delayed	☐ ID

☐

D. ADMISSION

27. On first admission to the ward, please state if there was evidence of the following (i-ix), for PART A, as documented in the notes (using the specified term in each case), and for PART B, in your opinion based on signs/symptoms displayed by the patient. If available, please also state for each, the date first occured.

	A) As documented in the notes			B) In your opinion		
		d d m m yyyy	NR		d d m m yyyy	NR
i) Infection	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐
ii) Sepsis	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐
iii) Severe sepsis	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐
iv) Septic shock	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐

28. What location was the patient first formally admitted to ?

(if admitted via ED, this refers to the ward following formal admission to hospital)

☐ CDU ☐ MAU/ SAU/ other assessment/ admissions unit
☐ Other general ward ☐ Specialist ward ☐ Not recorded
☐ HDU etc (LEVEL 2) ☐ ICU etc (LEVEL 3) ☐ N/A- patient died in A&E

b. In your opinion, was this an appropriate level of care? ☐ Yes ☐ No ☐ Insufficient data

c. If NO, in your opinion, what level of care should the patient have been admitted to? ☐ LEVEL 0/1 ☐ LEVEL 2 ☐ LEVEL 3

d. In your opinion, was the patient admitted to the appropriate specialty? ☐ Yes ☐ No ☐ Insufficient data

29a. Was admission to the ward delayed? ☐ Yes ☐ No ☐ Unknown

b. If YES, why was this? ☐ Lack of beds ☐ Delayed investigations ☐ Lack of staff
☐ Other (please state):

c. If YES, in your opinion, did this affect the outcome? ☐ Yes ☐ No ☐ Unknown

30. In your opinion, was the first review by a consultant conducted within an appropriate ttimeframe ? ☐ Yes ☐ No ☐ Unknown

31a. Were changes to the patient's care made following consultant review? ☐ Yes ☐ No ☐ Unknown

b. If YES, did this include: (please mark all that apply)

☐ Diagnosis of sepsis ☐ Documentation of diagnosis of sepsis ☐ Documentation of severity of sepsis ☐ Investigations
☐ Other (please state): ☐ Treatment plan ☐ Start of care bundle ☐ Monitoring plan

E. PATIENTS WITH HOSPITAL ACQUIRED INFECTION

32. In your opinion, did the patient acquire the infection that caused this episode of sepsis, in hospital? ☐ Yes ☐ No

If YES, please complete questions 33-41. If NO, please proceed to Q 42.

33a. Was sepsis diagnosed following an invasive procedure? ☐ Yes ☐ No ☐ Unknown

b. If YES, what procedure?

c. If YES, what was the date/ time of the procedure? ☐ Not applicable 24 hour clock

Date ☐☐ ☐☐ ☐☐ ☐ NR (d d / m m / y y) Time ☐☐ ☐☐ ☐ NR (h h / m m)

34a. If YES to Q33a, did the patient receive prophylactic antimicrobials pre/post procedure? ☐ Yes ☐ No ☐ Unknown

b. If NO, in your opinion, should the patient have receive prophylactic antimicrobials pre/post procedure? ☐ Yes ☐ No ☐ Unknown

c. If YES to Q33a, is there evidence that a surgical site infection prevention bundle was adopted (e.g. chlorohexidine skin press/ surgical clippers etc.) ☐ Yes ☐ No ☐ Unknown

35. In your opinion, was the source of infection that led to this episode of sepsis:(answers may be multiple)

- ☐ Directly related to the procedure: eg wound site infection
- ☐ Related to the peri/post -operative care of the patient at the time of the procedure
- ☐ Intra-vascular device
- ☐ Cannula
- ☐ Other hospital acquired infection (please state):
- ☐ Ventilator acquired pneumonia
- ☐ Infected pressure sores
- ☐ Catheter
- ☐ Graft/mesh
- ☐ Insufficient Data

36a. In your opinion, was the infection preventable? ☐ Yes ☐ No ☐ Insufficient data

b. If YES, please expand on your answer

37. When was the infection first recorded in the case-notes?

Date ☐☐ ☐☐ ☐☐ ☐ NR Time ☐☐ ☐☐ ☐ NR

38. In the 24 hours prior to sepsis being diagnosed, what was the frequency of monitoring?

- ☐ Hourly (or more frequently)
- ☐ Every >1- <2 hours
- ☐ Every 2 - <4 hours
- ☐ Every 4 - <6hours
- ☐ Every 6 - <12 hours
- ☐ Every 12 hours or less frequently

39. In the 24 hours prior to sepsis being diagnosed, was the patient monitored on a track and trigger tool or EWS? ☐ Yes ☐ No ☐ NR

40. In your opinion, was the frequency of monitoring adequate? ☐ Yes ☐ No ☐ ID

41. In your opinion, could the initial infection that led to the episode of sepsis have been:

- **a.** Identified sooner? ☐ Yes ☐ No ☐ ID
- **b.** Treated sooner? ☐ Yes ☐ No ☐ ID
- **c.** Treated more appropriately? ☐ Yes ☐ No ☐ ID

F. FIRST IDENTIFICATION OF SEPSIS

42. Please state the time and date when the patient was first documented in the case notes (using the exact terms specified) as having sepsis, severe sepsis, septic shock (as applicable) and in your opinion, the first time the patient showed signs of being positive for sepsis, severe sepsis and septic shock:

	A) As documented in the notes								B) In your opinion							
	Time: h h	m m	NR	Date d d	m m	y y y y	NR	N/A	Time: h h	m m	NR	Date d d	m m	y y y y	NR	N/A
i) Sepsis	☐☐	☐☐	☐	☐☐	☐☐	☐☐	☐	☐	☐☐	☐☐	☐	☐☐	☐☐	☐☐	☐	
ii) Severe sepsis	☐☐	☐☐	☐	☐☐	☐☐	☐☐	☐	☐	☐☐	☐☐	☐	☐☐	☐☐	☐☐	☐	☐
iii) Septic shock	☐☐	☐☐	☐	☐☐	☐☐	☐☐	☐	☐	☐☐	☐☐	☐	☐☐	☐☐	☐☐	☐	☐

43. At the time the patient first had sepsis, are there any records of the patient's vital signs? ☐ Yes ☐ No ☐ ID

If YES, time/ date taken 24 hr clock ☐☐ ☐☐ ☐ NR (h h m m) ☐☐ ☐☐ ☐☐ ☐ NR (d d m m y y)

44. If YES, what was included and what were the results?

☐ Temperature (C)	☐☐.☐	☐ Not recorded
☐ Blood pressure	☐☐☐ / ☐☐	☐ Not recorded
☐ Heart rate	☐☐☐	☐ Not recorded
☐ Respiratory rate	☐☐☐	☐ Not recorded
☐ Glasgow Coma Score	☐☐	☐ Not recorded

45. Was the diagnosis of sepsis made using? ☐ Sepsis screening tool ☐ Other Track & Trigger tool (please state)

☐ National Early Warning Score (NEWS) ☐ None of the above (clinical signs only)

	Sepsis?	Severe sepsis?	Septic Shock?
46a. In your opinion, was there a delay in identifying:	☐ Yes ☐ No ☐ ID	☐ Yes ☐ No ☐ ID ☐ NA	☐ Yes ☐ No ☐ ID ☐ NA
b. If YES, please estimate how long (to nearest 30 minutes):	h h m m ☐☐ ☐☐ ☐ NR	h h m m ☐☐ ☐☐ ☐ NR	h h m m ☐☐ ☐☐ ☐ NR
c. If YES, Was this due to:	☐ Incorrect calculation of EWS ☐ Missed by reviewing clinician ☐ Insufficient frequency of clinical review ☐ Insufficient monitoring/ inverstigations ☐ Other (please state)	☐ Incorrect calculation of EWS ☐ Missed by reviewing clinician ☐ Insufficient frequency of clinical review ☐ Insufficient monitoring/ inverstigations ☐ Other (please state)	☐ Incorrect calculation of EWS ☐ Missed by reviewing clinician ☐ Insufficient frequency of clinical review ☐ Insufficient monitoring/ inverstigations ☐ Other (please state)
d. If YES to part A, in your opinion, did this affect the outcome?	☐ Yes ☐ No ☐ ID	☐ Yes ☐ No ☐ ID	☐ Yes ☐ No ☐ ID

If YES, please give details:

e. If a diagnosis of SEVERE sepsis was never recorded, was this because a diagnosis of SEVERE sepsis was missed? ☐ Yes ☐ No ☐ ID

47a. Were blood cultures taken at the time sepsis was first diagnosed? ☐ Yes ☐ No ☐ NR

b. If YES, was there a delay in obtaining cultures? ☐ Yes ☐ No ☐ ID

c. Were other body fluid/tissue cultures taken? ☐ Yes ☐ No ☐ ID

d. If YES, was there a delay in obtaining other body fluid/tissue cultures ? ☐ Yes ☐ No ☐ ID

e. If YES to b or d, please explain why:

48a. At the time sepsis was diagnosed, were blood gases taken? ☐ Yes ☐ No ☐ NR

b. If NO, how long after diagnosis were they first taken? ☐☐ hours ☐ Not taken after diagnosis ☐ NR

c. What were the results of the blood gases first taken at diagnosis of sepsis?

pH ☐☐.☐☐ ☐ NR PaO2 ☐☐☐ mm Hg ☐ NR HCO3 ☐☐☐ mEq/L ☐ NR

PaCO2 ☐☐☐ mmHg ☐ NR FiO2 ☐☐ mm Hg ☐ NR Base Excess ☐☐ ☐ NR SaO2 ☐☐☐ % ☐ NR

☐ Other (Please state):

49. At the time sepsis was diagnosed, which of the following investigations carried out? ☐ FBC ☐ U&E ☐ LFTs ☐ Amylase ☐ CRP ☐ CT scan ☐ Lactate ☐ eGFR ☐ Chest X Ray ☐ Lipase ☐ Ultrasound ☐ Coagulation screening

☐ Other (Please state): ☐ Urine analysis: MSU/CSU

50a. Were any investigations relating to the identification of sepsis (or its severity) not performed that should have been at this time? ☐ Yes ☐ No ☐ Insufficient data

b. Were any investigations relating to the identification of sepsis (or its severity) delayed? ☐ Yes ☐ No ☐ Insufficient data

c. If YES to a or b , please give details of which investigations were delayed/not performed

51. At the time sepsis was diagnosed, was the source of sepsis identified within an appropriate timeframe ☐ Yes ☐ No ☐ ID ☐ N/A-souce not identified

52a. Was there a delay in any of the investigations to identify the source of sepsis? ☐ Yes ☐ No ☐ ID ☐ N/A- no inverstigations performed

b. Were any of the investigations to identify the souce of sepsis not performed that should have been? ☐ Yes ☐ No ☐ ID

c. If YES, to a or b please give details of which investigations were delayed/ not performed

53. At the time sepsis was diagnosed, is it documented that the patient had any of the following:

☐ Poor urine output ☐ hyperbilirubinaemia ☐ Ileus ☐ Mottling ☐ Reduced capillary refill

54. In your opinion, was the documentation of the diagnosis of sepsis: ☐ Good ☐ Adequate ☐ Poor

☐ Insufficient data to make judgement

G. EARLY CLINICAL MANAGEMENT OF SEPSIS

55. Immediately following diagnosis of sepsis, which team oversaw the early clinical management of this patient?

☐ Acute medicine/ general medicine ☐ General surgical ☐ Emergency medicine ☐ Critical care (Level 2- HDU etc.)

☐ Other specialist medical team ☐ Other specialist surgical ☐ Sepsis team ☐ Critical care (Level 3- ICU etc.)

☐ Other (Please state): ☐ Critical care outreach

56. Following diagnosis of sepsis, given the patient's condition at this time:

a) Was the patient reviewed by a doctor within an appropriate timeframe? ☐ Yes ☐ No ☐ Unable to answer-time not documented

b) Was the patient reviewed by an ST3 or above within an appropriate timeframe? ☐ Yes ☐ No ☐ Unable to answer-time not documented

c) Was the patient reviewed by a consultant within an appropriate timeframe? ☐ Yes ☐ No ☐ Unable to answer-time not documented

57. Did the diagnosis of sepsis initiate the patient being started on a sepsis care bundle/care pathway? ☐ Yes ☐ No ☐ NR ☐ N/A- aleady on a bundle

58a. In your opinion, following diagnosis of sepsis, was there timely escalation/ commencement of treatment? ☐ Yes ☐ No ☐ Insufficient data

b. If NO to 58a, did the patient deteriorate whilst awaiting treatment? ☐ Yes ☐ No ☐ Insufficient data

c. If YES, please give details

d. If YES to 58a, in your opinion did this impact on the outcome? ☐ Yes ☐ No ☐ Insufficient data

e. If YES to 58d, please give details

59a. Please state below if the patient required and promptly received fluid resuscitation and oxygen:

Oxygen ☐ Promptly received ☐ Received- delayed ☐ Not received ☐ NR

Fluid resuscitation ☐ Promptly received ☐ Received- delayed ☐ Not received ☐ NR

b. If not received, please explain:

c. If there was a delay in fluid resuscitation, how long was the delay? ☐☐ h ☐☐ m ☐ Not recorded

60. Was an accurate fluid balance chart maintained? ☐ Yes ☐ No ☐ Insufficient data

61a. Was there any room for improvement in the fluid management of this patient? ☐ Yes ☐ No ☐ Insufficient data

b. If YES, was this due to: ☐ Delay in commencing fluid resuscitation ☐ Blood products ☐ Type of fluid administered ☐ Documentation of fluid balance ☐ Delay in commencing vasopressors ☐ Monitoring frequency/type ☐ Other (please state):

c. If YES to 61a, in your opinion, was the outcome affected? ☐ Yes ☐ No ☐ Insufficient data

d. If YES, Please expand on your answer:

62. Was there a pathogen identified as the cause of sepsis in this patient? ☐ Yes ☐ No ☐ Not recorded

63. How long after first diagnosis of sepsis was the first dose of antimicrobial administered?

☐ ≤ 30 minutes ☐ >30- ≤ 1 hour ☐ >1 hour - ≤2 hours ☐ >2 hours- ≤4 hours ☐ >4- ≤ 6 hours ☐ >6 hours- ≤12 hours ☐ >12 hours ☐ Time administered not documented ☐ N/A- Already had received first dose of antimicrobials when first diagnosed with sepsis in hospital

64a. In your opinion as there an avoidable delay? ☐ Yes ☐ No ☐ Insufficient data

b. If YES, what caused the delay? *multiple answers* ☐ Communication between teams eg. at handover ☐ Waiting for source confirmation ☐ Waiting for microbiology review ☐ Other (please state) ☐ Pharmacy delay ☐ Lack of escalation ☐ Delay in prescribing

65a. In your opinion, could this delay have affected the outcome? ☐ Yes ☐ No ☐ Unknown

b. If YES, please expand on your answer

66. How was the antimicrobial chosen? ☐ Administered broad spectrum antimicrobial ☐ According to local Trust policy ☐ Rationale not documented *multiple answers* ☐ Other (please state) ☐ Previous culture results ☐ based on the site of infection

67a. In your opinion, was an appropriate antimicrobial prescribed? ☐ Yes ☐ No ☐ Unknown

b. If YES, in your opinion, was the correct dose regimen prescribed? ☐ Yes ☐ No ☐ Unknown

68. Was there any consultation with infectious diseases specialist/ microbiologist? ☐ Yes ☐ No ☐ Not recorded

69a. Was there regular review of the patient's antimicrobial therapy? ☐ Yes ☐ No ☐ Not recorded

b. If YES, by whom?: ☐ Microbiologist/infectious diseases specialist ☐ Other (please state): _____

c. Is there evidence that sufficient consideration was given to:
- i) Escalation ☐ Yes ☐ No ☐ Insufficient data
- ii) De-escalation ☐ Yes ☐ No ☐ Insufficient data
- iii) Treatment duration ☐ Yes ☐ No ☐ Insufficient data

70a. Was the source of sepsis identified in this patient? ☐ Yes ☐ No ☐ Insufficient data

b. If NO, could more have been done to identify the source of sepsis? ☐ Yes ☐ No ☐ Insufficient data

71a. Was the source amenable to immediate source control? ☐ Yes ☐ No ☐ Insufficient data

b. If YES, what procedure was undertaken to control the source of sepsis? _____

c. If YES to 71a, when did the procedure to control the source take place?

Date d d m m y y ☐ NR Time h h m m ☐ NR

72a. Was there a delay in controlling the source of infection? ☐ Yes ☐ No ☐ Unknown

b. If YES, was it due to: *multiple answers*
☐ Clinical reasons that necessitated a delay ☐ Lack of available nursing staff ☐ Out of hours/ weekend
☐ Other (please state) ☐ Delay in investigations ☐ Lack of beds ☐ Delay in identifying source ☐ Lack of specialist

_____

c. In your opinion, could this have affected the outcome? ☐ Yes ☐ No ☐ Unknown

d. If YES please expand on your answer

_____

73a. Is there evidence in the case notes that there was discussion between the clinican(s) managing the care of this patient and the patient/their relatives ☐ Yes ☐ No ☐ Not applicable

b. If YES, did it include discussion of the following (please complete as appropriate):

	Patient	Relatives
i) Diagnosis of sepsis?	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
ii) Its likely cause?	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
iii) regularly updated treatment plan?	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
iv) Possible outcome (including risk of poor outcome)	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
v) Rehabilitaion plan	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
vi) Other (please state):	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A

_____

74a. Was the entire patient's episode of sepsis managed on a general ward (Level 0/1)? ☐ Yes ☐ No

b. If YES, were there regular reviews by: ☐ Critical care consultant ☐ Critical care outreach ☐ Microbiology ☐ Other (please state): _____

75a. Was the patient given ionotropes/ vasopressors on the general ward? ☐ Yes ☐ No ☐ Unknown ☐ N/A- not managed on general ward

b. If YES to part A, was there sufficient monitoring to support this? ☐ Yes ☐ No ☐ Unknown

c. If YES to part A, was the administration of ionotopes/ vasopressors timely? ☐ Yes ☐ No ☐ Unknown

d. If YES to part A, was this a holding measure until a critical care bed became available? ☐ Yes ☐ No ☐ Unknown

e. If YES to part A, do you consider this to be appropriate? ☐ Yes ☐ No ☐ Unknown

76a. In your opinion was management on the ward appropriate? ☐ Yes ☐ No ☐ Unknown

b. If NO please expand on your answer

77a. At any time during the admission, was the resuscitation status of the patient recorded? ☐ Yes ☐ No ☐ Unknown

b. If NO, in your opinion, should it have been recorded? ☐ Yes ☐ No ☐ Unknown

c. If YES to part A, what was the cardiopulmonary resuscitation status of the patient?
☐ For cardio pulmonary resuscitation
☐ Do not attempt cardio pulmonary resuscitation

78a. Overall, in your opinion, was there room for impovement in the initial management of this patient? ☐ Yes ☐ No ☐ Not recorded

b. If YES, given your knowledge of the case, please state in which areas were there deficiencies in care and whether you think the deficiency could have affected the outcome(please mark all that apply):

i) Delay in diagnosis of infection	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
ii) Delay in diagnosis of sepsis	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
iii) Failure to adhere to standard sepsis care pathway (eg sepsis 6)	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
iv) Failure to deal with source of infection within an appropriate timespan	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
v) Inadequacies in monitoring	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
vi) Inadequacies in review	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
vii) Communication with patient/ relative	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
viii) Documentation	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown
ix) Other (please state):	☐ Yes ☐ No	Outcome could have been affected ☐ Yes ☐ No ☐ Unknown

H. ESCALATION/ CRITICAL CARE MANAGEMENT

79a. Was the patient referred to the critical care outreach service (CCOT- or equivalent) ☐ Yes ☐ No ☐ Not recorded

b. If NO, was this because ☐ No CCOT at this hospital ☐ Not required
☐ Other (please state): ☐ Insufficient data ☐ CCOT not available out of hours at this hospital

c. If YES to part A , what triggered referral/call to the outreach service (or equivalent)? ☐ Direct referral by clinician(s) on ward ☐ Direct referral by nursing staff on ward
☐ Peri-arrest/cardiac arrest ☐ Manual EWS calculation
☐ Other (please state): ☐ Not recorded ☐ Automatic call to CCOT due to EWS trigger

d. If YES to 79a, was this a timely referral? ☐ Yes ☐ No ☐ ID ☐ Not applicable
If NO, what caused the delay? ☐ CCOT not available out of hours ☐ Insufficient monitoring of observations
☐ Insufficient frequency of clinician review ☐ Insufficient seniority of review ☐ Inaccurate calculation of EWS
☐ Other (please state): ☐ Insufficient data to answer

e. Once the call had been made, did the CCOT (or equivalent) arrive promptly? ☐ Yes ☐ No ☐ Not recorded

80. Prior to referral, was there any input from the CCOT or equivalent? ☐ Yes ☐ No ☐ Not recorded

81. Please state time and date of first review by CCOT or equivalent:
Date ☐☐ ☐☐ ☐☐ ☐ NR Time ☐☐ ☐☐ ☐ Not applicable ☐ NR

82a. Was the patient referred directly to Critical Care (Level 2/3)? ☐ Yes ☐ No ☐ NR

b. If YES, was there a timely response form Critical Care? ☐ Yes ☐ No ☐ ID

83. What was the outcome of the Critical Care referral?
☐ Continued management on the general ward- no change
☐ Transferred to ICU/ Level 3 care
☐ Transferred to HDU/ Level 2 care
☐ Continued management on the general ward with advice given by critical care
☐ Other (please state)

84a. If the patient was not admitted to critical care, in your opinion was this the correct decision? ☐ Yes ☐ No ☐ ID

b. If NO, please expand on your answer?

If this patient was just treated on the ward (Level 0/1) and never admitted to Critical Care please proceed directly to Qx. If the patient was admitted to critical care (Level 2/3) please continue to Q84

85. ON ADMISSION TO CRITICAL CARE, please state if there was evidence of the following (i-ix), for PART A, as documented in the notes (using the specified term in each case), and for PART B, in your opinion based on signs/symptoms displayed by the patient. If available, please also state for each, the date first occured.

	A) As documented in the notes			B) In your opinion		
		d d m m y y y y	NR		d d m m y y y y	NR
i) Infection	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐
ii) Sepsis	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐
iii) Severe sepsis	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐
iv) Septic shock	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐	☐ Yes ☐ No	☐☐ ☐☐ ☐☐	☐

86. On HDU/ICU please state which of the systems needed support and if they received treatment, and whether in your opinion, it was timely?

☐ Cardiovascular system	Inotropes/ vasopressors given	☐ Yes	☐ No	☐ N/A	Timely	☐ Yes	☐ No	☐ N/A
☐ Respiratory system	Invasive ventilation/ CPAP	☐ Yes	☐ No	☐ N/A	Timely	☐ Yes	☐ No	☐ N/A
☐ Renal System	RRT/ Filtration	☐ Yes	☐ No	☐ N/A	Timely	☐ Yes	☐ No	☐ N/A

87a. On HDU/ICU please state which invasive monitoring was employed? ☐ Saturations

☐ Cardiac output monitoring ☐ Arterial line ☐ Central venous catheter ☐ CVP measurement

☐ Other (please state)

b. In your opinion was the monitoring adequate? ☐ Yes ☐ No ☐ ID

c. If NO, what was not employed that should have been?

88. If the patient required invasive ventilatory support, were tidal volumes and median inspiratory pressures maintained within adequate limits? (5-7mL/Kg and 30mmHg) ☐ Yes ☐ No ☐ NR ☐ N/A

89. Was there regular review by microbiology in Critical Care? ☐ Yes ☐ No ☐ NR

90a. Was there any room for improvement in the critical care management of this patient? ☐ Yes ☐ No ☐ ID

b. If YES, in which areas? ☐ Monitoring ☐ Treatment ☐ Communication between healthcare professionals ☐ Review

☐ Other (please state) ☐ Management of complications of sepsis ☐ Communication with the patient/their relatives ☐ Documentation

I. END OF LIFE CARE

91a. Was treatment withdrawn at any time during this admission? ☐ Yes ☐ No ☐ NR

b. If YES, in your opinion, was this decision appropriate? ☐ Yes ☐ No ☐ ID

c. Was the decision to withdraw treatment:

i) Made with reference to clinicians of appropriate seniority? ☐ Yes ☐ No ☐ ID

ii) Made by more than one clinican? ☐ Yes ☐ No ☐ NR

iii) Discussed with the patient? ☐ Yes ☐ No ☐ NR ☐ N/A

iv) Discussed with the patient's relatives? ☐ Yes ☐ No ☐ NR ☐ N/A

v) Discussed with the patient advocate? ☐ Yes ☐ No ☐ NR ☐ N/A

92a. Was the patient transferred to an End of Life care pathway for terminal care? ☐ Yes ☐ No ☐ NR

b. If YES, in your opinion, was this decision appropriate? ☐ Yes ☐ No ☐ ID

c. Was the decision:

i) Made with reference to clinicians of appropriate seniority? ☐ Yes ☐ No ☐ ID

ii) Made by more than one clinican? ☐ Yes ☐ No ☐ NR ☐ N/A

iii) Discussed with the patient? ☐ Yes ☐ No ☐ NR ☐ N/A

iv) Discussed with the patient's relatives? ☐ Yes ☐ No ☐ NR ☐ N/A

v) Discussed with the patient advocate? ☐ Yes ☐ No ☐ NR ☐ N/A

93a. If NO to Q91b or 92b, please expand on your answer:

94a. Was there input from the palliative care team? ☐ Yes ☐ No ☐ N/A

b. If NO, in your opinion, should there have been? ☐ Yes ☐ No

J. COMPLICATIONS OF SEPSIS

95a. Following step-down from Critical Care (or, for those that were not admitted to Critical Care-at any time during the admission), is there any evidence that the patient had any complications of sepsis (or its management)? ☐ Yes ☐ No ☐ Unknown

b. If YES, please mark all that apply, and if they were identified in a timely manner, adequately documented and if treatment was appropriate.

	i. Identified in timely manner	**ii.** Adequate documentation	**iii.** Appropriate treatment
☐ Amputation(s) (please state site): _____	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
☐ Chronic pain	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
☐ Worsened cognitive state	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
☐ Worsened physical function	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
☐ Post traumatic stress disorder	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
☐ Post sepsis syndrome (see definitions)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
☐ Other (please state) _____	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

c. If NO to any of the above, please give details:

J. DISCHARGE

If the patient was discharged alive* please answer questions 96-102. If the patient died prior to discharge, please proceed directly to question 103:

or if alive at 30 days following diagnosis if sill an inpatient at that time

96a. Given the condition of the patient at discharge, was the rehabilitation planning for this patient adequate? ☐ Yes ☐ No ☐ Unknown

b. What referrals were made* ? ☐ Specialist neurorehabilitation ☐ Physiotherapy referral ☐ Occupational therapy referral ☐ Other therapy referral ☐ Speech and language therapy referral ☐ Neuropsychology referral ☐ None ☐ Unknown ☐ Other (please state): _____

97a. Was a follow up appointment made with*: ☐ The physician admitted under ☐ The surgeon admitted under ☐ The GP ☐ No follow-up appointment made ☐ Unknown ☐ Intensivist that cared for the patient in critical care ☐ Other (please state): _____

**Answers may be multiple*

b. Was this appropriate? ☐ Yes ☐ No ☐ Unknown

c. If NO, please give details:

98a. Is there evidence in the case notes that the patient's GP was informed of the admission? ☐ Yes ☐ No ☐ Unknown

b. Was the GP given a copy of the discharge form? ☐ Yes ☐ No ☐ Unknown

99. Please state if sufficient information about the illness and revovery were provided to the following persons and state the format in which the information was provided:

a) Patient ☐ Yes ☐ No ☐ NR ☐ N/A ☐ Verbal discussion documented ☐ Written info

b) Relative(s) ☐ Yes ☐ No ☐ NR ☐ N/A ☐ Verbal discussion documented ☐ Written info

c) Patient's principal care giver ☐ Yes ☐ No ☐ NR ☐ N/A ☐ Verbal discussion documented ☐ Written info

100a. Did the patient have any complications of sepsis at discharge*? ☐ Yes ☐ No ☐ NR

b. If YES, please list: ☐ Amputation(s) (please state site) ☐ Chronic pain

☐ Other (please state) ☐ Post sepsis syndrome (see definitions) ☐ Worsened physical function ☐ Worsened cognitive state ☐ Post traumatic stress disorder

101. What was the functional status at discharge* (see definitions)?

☐ No disability ☐ Slight disability
☐ Slight - moderate disability ☐ Moderate disability
☐ Moderate - severe disability ☐ Severe disability

102a. Was the patient re-admitted to hospital? ☐ Yes ☐ No ☐ Not recorded

b. If YES, what was the reason? ☐ Re-infection ☐ New infection ☐ Complications of this episode of sepsis

☐ Other (please state)

If the patient died, please complete Q103-104, if the patient was discharged alive (or still alive 30 days post diagnosis as an inpatient) please proceed directly to Q105:

103. Was a post mortem performed? ☐ Yes ☐ No ☐ Not recorded

104a. Was sepsis noted on the death certificate as contributing to death? ☐ Yes ☐ No ☐ Not recorded

b. If NO, in your opinion should it have been? ☐ Yes ☐ No ☐ Unknown

L. OVERALL QUALITY OF CARE

105a. Please rate the overall quality of care for this case (please select only one category)

☐ Good Practice- A standard of care you would expect from yourself, your trainees, and your institution

☐ Room for improvement in CLINICAL aspects of care

☐ Room for improvement in ORGANISATIONAL aspects of care

☐ Room for improvement in BOTH CLINICAL AND ORGANISATIONAL aspects of care

☐ Less than satisfactory- Several aspects of clinical and organisational care that are well below a standard you would expect from yourself, your trainees and institution

b. If less than good, please summarise main reasons for the grade given:

106. Was this case a cause for concern? (See NCEPOD Cause for Concern policy) ☐ Yes ☐ No

107a. Was this case an example of a case study that may be used to highlight a theme in the report? ☐ Yes ☐ No

b. If YES, please summarise below: