Acute Limb Ischaemia - Reviewer Assessment Form

A. Study inclusion and Case Reviewer details

What is this study about?
To explore current care pathways for patients with ALI; identify remediable clinical and organisational factors that can improve the delivery and quality of the required care.

Inclusions
Patients aged 18 or over who were admitted to hospital between 1st January 2023 and 31st March 2023 and diagnosed with Acute Limb Ischaemia (ALI). Patients with Chronic Limb Ischaemia (CLI) without Acute Limb Ischaemia, Acute Limb Ischaemia from Trauma, or Iatrogenic causes of Acute Limb Ischaemia are not included.

2. Name of Reviewer

3. Date of review meeting

☐ Unknown

4. Site ID

5. Was the clinician questionnaire available for the review of this case?

◯ yes ◯ no

B. Patient Details

"Unable to answer"
Please use the 'unable to answer' box if there is not enough information available in the notes to answer the question, or the part of the notes needed to answer the question have not been returned, or if there is not enough detail to form an opinion

2. Age at presentation to hospital

Years ☐ Unknown

3. Sex

◯ Male ◯ Female

4. Presenting limb:

☐ Right lower limb ☐ Right upper limb ☐ Left lower limb ☐ Left upper limb

5. Was the patient receiving any social support/care?

◯ Yes ◯ No ◯ Unknown

6. Please make an estimation of the patient's Rockwood Clinical Frailty score prior to the admission
https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2022/02/rockwood-frailty-scale_.pdf

◯ 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 ascertain

7. Did the patient have any communication difficulties?

☐ Language ☐ Hearing difficulties ☐ Learning disability
☐ Learning difficulties ☐ None ☐ Unknown

Please specify any additional options here...

8a. Did the patient have the capacity to consent to treatment?

◯ Yes ◯ No ◯ Unknown

8b. If answered "No" to [8a] then:
Did they have a patient advocate?

◯ Yes ◯ No ◯ Unknown

C. Summary of key dates and times

Please take a few minutes to read through the notes and familiarise yourself with the information available to you. As you go through the notes please record the following dates and times:

1. Date of any previous acute limb ischaemia

☐ Not Applicable ☐ Unknown

2a. Date of onset of symptoms (approximately if not known)

☐ Unknown

2b. Time of onset of symptoms (Approximately)

☐ Unknown

3a. Did the patient report their symptoms to a healthcare professional prior to the hospital admission?

◯ Yes ◯ No ◯ Unable to answer

3b. If answered "Yes" to [3a] then:
To whom did the patient first report their symptoms?

◯ GP ◯ Urgent Treatment Centre ◯ NHS 111
◯ 999 ◯ Unknown

If not listed above, please specify here...

3c. If answered "Yes" to [3a] then:
Date the patient first reported symptoms to a healthcare professional (approximately):

☐ Unknown

3d. If answered "Yes" to [3a] then:
Time the patient first reported symptoms to a healthcare professional (approximately):

☐ Unknown

4a. Was the patient transferred from a non-specialist "spoke" hospital?

◯ Yes ◯ No ◯ Unknown

4b. If answered "Yes" to [4a] then:
Date and time of arrival in spoke hospital

☐ Not Applicable ☐ Unknown

4c. If answered "Yes" to [4a] then:
Date and Time of initial triage assessment in "spoke" hospital

☐ Not Applicable ☐ Unknown

4d. If answered "Yes" to [4a] then:
Date / time initial clinical assessment in spoke hospital
Assessment by a clinician following triage

☐ Not Applicable ☐ Unknown

5a. If answered "Yes" to [4a] then:
Date of referral from non-specialist "spoke" hospital

☐ Not Applicable ☐ Unknown

5b. If answered "Yes" to [4a] then:
Time of referral from non-specialist "spoke" hospital

☐ Not Applicable ☐ Unknown

At the vascular specialist "hub" hospital

7a. Date of arrival at vascular specialist "hub" hospital

☐ Unknown

7b. Time of arrival in vascular specialist "hub" hospital

☐ Unknown

8a. Date of the first assessment on arrival in hub hospital:

☐ Not Applicable ☐ Unknown

8b. Time of the first assessment on arrival in hub hospital:

☐ Not Applicable ☐ Unknown

9a. Date and time of diagnosis of acute limb ischaemia:

☐ Not Applicable ☐ Unknown

9b. Date/ time of management plan/ revascularisation plan/ plan to undertake procedure

☐ Not Applicable ☐ Unknown

10a. Date/ time of first procedure
If patient did not have a procedure, please select "not applicable"

☐ Not Applicable ☐ Unknown

10b. Date/ time of subsequent procedure
If multiple procedures to treat ALI, please give the date of the final one before discharge. If no subsequent procedures, please select "Not Applicable"

☐ Not Applicable ☐ Unknown

11. Date/ time of discharge from hospital (or death)

☐ Unknown

12. Date of readmission to hospital (within 30 days)
please select not applicable if the patient was not re-admitted to hospital

☐ Not Applicable ☐ Unknown

D. Care Prior to arrival in hospital

1a. Did this patient have a history of chronic limb ischaemia prior to this acute presentation?

◯ yes ◯ no ◯ Unknown

1b. If answered "yes" to [1a] then:
Is there evidence of any missed opportunities for intervention or room for improvement in the care provided prior to this presentation

◯ Yes ◯ No ◯ Unable to answer

1c. If answered "Yes" to [1b] then:
Please provide details:

2a. Is there evidence in the notes that the patient sought medical advice in relation to acute limb ischaemia prior to the index hospital admission?
ie prior to the presentation at the spoke hospital that led to the transfer to the vascular hub hospital for treatment, or prior to presenting directly to the vascular hub

◯ Yes ◯ No ◯ Unable to answer

2b. If answered "Yes" to [2a] then:
If YES, was there a delay in the patient seeking advice (pre-admission)?

◯ Yes ◯ No ◯ Unable to answer

2c. If answered "Yes" to [2b] then:
If YES, please estimate the length of the delay

◯ 1-6 hours ◯ >6-12 hours ◯ >12-24 hours ◯ >1-2 days
◯ >2-4 days ◯ >4-7 days ◯ >7 days

If not listed above, please specify here...

3a. Were there any other patient factors that caused a delay in the presentation?

◯ Yes ◯ No ◯ Unknown

3b. If answered "Yes" to [3a] then:
Please provide details of other patient factors

4a. In your opinion, did any of the delays due to patient factors impact the outcome?

◯ Yes ◯ No ◯ Unable to answer

4b. If answered "Yes" to [4a] then:
Please provide details: (patient factors -delay)

5a. In your opinion, were there any missed opportunities to recognise Acute Limb Ischaemia prior to the admission to hospital? (Please tick all that apply)
Please select all that apply

☐ Yes - from the patient
☐ Yes - from primary care
☐ Yes - from non-specialist "spoke" hospital"
☐ No
☐ Yes - from NHS 111
☐ Yes - from an urgent treatment centre
☐ Yes - Other
☐ Unable to answer

Please specify any additional options here...

5b. If answered "Yes - from the patient", "Yes - from NHS 111", "Yes - from primary care", "Yes - from an urgent treatment centre", "Yes - from non-specialist "spoke" hospital"" or "Yes - Other" to [5a] then:
How long was the delay?
please estimate

- ◯ <1 hour
- ◯ 1-4 hours
- ◯ >4-6 hours
- ◯ >6-12 hours
- ◯ >12-24 hours
- ◯ >1-2 days
- ◯ >2-4 days
- ◯ >4-7 days
- ◯ > 7 days
- ◯ Unknown

5c. If answered "Yes - from the patient", "Yes - from NHS 111", "Yes - from primary care", "Yes - from an urgent treatment centre", "Yes - from non-specialist "spoke" hospital"", "Yes - Other" or "Unable to answer" to [5a] then:
If Yes, please expand on your answer

5d. If answered "Yes - from the patient", "Yes - from NHS 111", "Yes - from primary care", "Yes - from an urgent treatment centre", "Yes - from non-specialist "spoke" hospital"" or "Yes - Other" to [5a] then:
In your opinion did this affect the outcome

- ◯ Yes
- ◯ No
- ◯ Unable to answer

6. If the patient was seen/assessed in primary care prior to presentation at hospital for the index admission, which of the following occured?
ie prior to presentation at spoke hospital for transfer or prior to presentation at hub hospital if presented directly, please select all that apply

- ☐ 6 'P's
- ☐ Diagnosis of suspected Acute Limb Ischaemia
- ☐ Rutherford score
- ☐ Anticoagulants
- ☐ Referral to Vascular hub
- ☐ Referral to nearest Emergency Department
- ☐ Doppler assessment
- ☐ Other investigations
- ☐ Not applicable - patient was not seen by HCP in primary care prior to presentation to hospital

Please specify any additional options here...

E. Attendance at referring, non-specialist "spoke" hospital

1. E1 Mode of presentation

- ◯ Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment
- ◯ Presented at vascular centre / "hub" hospital for treatment

If the patient did not initially present at a spoke hospital, please skip to next section

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Ambulance

2a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E2 Was this patient transferred to hospital by ambulance?

◯ Yes ◯ No ◯ Unknown

2b. If answered "Yes" to [2a] then:
E5 Was 'Acute Limb Ischaemia' mentioned on the patient report form (PRF)?

◯ Yes ◯ No ◯ Unknown

2c. If answered "Yes" to [2a] then:
In your opinion, would the patient have benefitted from being taken directly to a vascular hub hospital by ambulance?

◯ Yes ◯ No ◯ Unable to answer

2d. If answered "Yes" to [2c] then:
If Yes, please expand on your answer (delay presenting to spoke hospital)

Presentation to Hospital

3a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
D In your opinion did any triage or streaming process delay assessment?

◯ Yes ◯ No ◯ Unable to answer

3b. If answered "Yes" to [3a] then:
If Yes, please expand on your answer (delay in triage)

4. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
In your opinion was the grade / specialty of the person making the initial assessment appropriate?

◯ Yes ◯ No ◯ Unable to answer

5a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E11a In your opinion, was there a delay in initial assessment?

◯ Yes ◯ No ◯ Unable to answer

5b. If answered "Yes" to [5a] then:
E11b How long was the delay?

5c. If answered "Yes" to [5a] then:
E11c What was the reason for the delay

Clinical Examination and investigations

7a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E21a In your opinion were all necessary assessments, investigations, imaging and elements of the clinical examination performed at the non-specialist "spoke" hospital??

◯ Yes ◯ No ◯ Unable to answer

7b. If answered "No" to [7a] then:
E17 If NO, please specify which assessments, investigations should have been performed but were not:
Answers may be multiple, please select all that apply

- ☐ Assessment of Limb pulses
- ☐ Assessment of sensation
- ☐ Doppler assessment
- ☐ ECG
- ☐ CTA
- ☐ DSA
- ☐ Assessment of Limb power
- ☐ Assessment of Compartment Syndrome
- ☐ NEWS2 score
- ☐ Vascular ultrasound
- ☐ MRA
- ☐ other

Please specify any additional options here...

8a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
In your opinion , were any assessments or investigations undertaken unnecessarily?

◯ Yes ◯ No ◯ Unable to answer

8b. If answered "Yes" to [8a] then:
E23 If YES, please specify which of the following investigations were carried out unnecessarily?

- ☐ Vascular ultrasound / doppler ultrasound
- ☐ MR arteriogram
- ☐ ECG
- ☐ CT arteriogram
- ☐ DSA

Please specify any additional options here...

9a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E24a In your opinion, were there any delays in the examinations/ investigations/imaging carried out at the spoke hospital?

◯ Yes ◯ No ◯ Unknown

9b. If answered "Yes" to [9a] then:
E24b Duration and details of delays

10a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
Was a differential/ working diagnosis of Acute Limb ischaemia made in the spoke hospital?

◯ Yes ◯ No ◯ Unable to answer

10b. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
In your opinion, was there a delay in diagnosing that the patient had acute limb ischaemia in the non-specialist "spoke " hospital?

◯ Yes ◯ No ◯ Unable to answer

10c. If answered "Yes" to [10b] then:
If YES, in your opinion, did this impact on the outcome?

◯ Yes ◯ No ◯ Unable to answer

11a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E14a Was a Rutherford classification given at the referring "spoke" hospital?
Add link here

◯ Yes ◯ No ◯ Unknown

11b. If answered "No" to [11a] then:
F* If No, based on the symptoms please estimate the Rutherford score at this time:

◯ I ◯ IIa ◯ IIb ◯ III
◯ Unknown

If not listed above, please specify here...

11c. If answered "Yes" to [11a] then:
E14b What was it?

◯ I ◯ IIa ◯ IIb ◯ III

11d. If answered "Yes" to [11a] then:
If YES was the Rutherford score correct?

◯ Yes ◯ No ◯ Unable to answer

11e. If answered "No" to [11d] then:
If the score was not done or was incorrect, based on the symptoms, please estimate the Rutherford score at this time:
See definitions for Rutherford score

- ◯ I -Limb viable not immediately threatened
- ◯ IIa- Limb marginally threatened, salvageable if promptly treated
- ◯ IIb- Limb immediately threatened, salvageable with immediate re-vascularization
- ◯ III- Limb irreversibly damaged, major tissue loss/ permanent nerve damage inevitable

If not listed above, please specify here...

12a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E Was the patient admitted to a ward in the referring "spoke" hospital?

◯ Yes ◯ No ◯ Unable to answer

12b. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] and "Yes" to [12a] then:
E In your opinion, was the decision to admit the patient appropriate?

◯ Yes ◯ No ◯ Unable to answer

13a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E Was any treatment given at the referring "spoke" hospital?

◯ Yes ◯ No ◯ Unable to answer

13b. If answered "Yes" to [13a] then:
E Was the treatment provided appropriate?

◯ Yes ◯ No ◯ Unable to answer

13c. If answered "No" to [13a] then:
E if no treatment was carried out at the referring "spoke " hospital, in your opinion, should there have been?

◯ Yes ◯ No ◯ Unable to answer

13d. If answered "Yes" to [13c] then:
E Please provide details:

14a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E Did the patient receive appropriate analgesia (at the referring, non-specialist "spoke" hospital)?

◯ Yes ◯ No ◯ Unable to answer

14b. If answered "No" to [14a] then:
Please provide details (analgesia- spoke hospital)

Referral to Hub Hospital (Specialist Vascular Centre)

15a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E28a Was there a discussion with a specialist at the vascular centre?

◯ Yes ◯ No ◯ Unknown

15b. If answered "Yes" to [15a] then:
E28c In your opinion, was this appropriate?

◯ Yes ◯ No ◯ Unknown

15c. If answered "No" to [15a] then:
E28c In your opinion, should a discussion have happened?

◯ Yes ◯ No ◯ Unknown

15d. If answered "Yes" to [15c] then:
E28d What should have been done instead? Who should have been involved?

16a. If answered "Presented at "spoke" hospital, transferred to vascular centre / "hub" hospital for treatment" to [1] then:
E31a Was there a delay in transfer to vascular specialist centre?

◯ Yes ◯ No ◯ Unknown

16b. If answered "Yes" to [16a] then:
E31b Please give details (including duration of delay, reasons (e.g. lack of beds, ambulance delay, imaging required pretransfer), patient deterioration)

16c. If answered "Yes" to [16a] then:
In your opinion, did the delay impact on the outcome?

◯ Yes ◯ No ◯ Unable to answer

F. Admission to vascular specialist "Hub" Hospital & Initial Management

1. F1 How did the patient present to the hub hospital / specialist vascular centre?

- ◯ Referral from GP/Primary Care transfer
- ◯ Referral from NHS 111
- ◯ Emergency Department (this hospital)
- ◯ Transfer from Emergency Department (other hospital)
- ◯ Ambulance attendance, blue light to ED
- ◯ Other ambulance attendance
- ◯ Referral from vascular surgery clinic
- ◯ Referral from another inpatient unit

If not listed above, please specify here...

Ambulance

2. If answered "Ambulance attendance, blue light to ED" or "Other ambulance attendance" to [1] then:
F3 Was a bypass protocol to transfer direct to vascular centre / hub hospital used?

◯ Yes ◯ No ◯ Unknown

3. If answered "Ambulance attendance, blue light to ED" or "Other ambulance attendance" to [1] then:
F4 Was acute limb ischaemia mentioned on the PRF?

◯ Yes ◯ No ◯ Unknown

4a. If answered "Transfer from Emergency Department (other hospital)", "Ambulance attendance, blue light to ED" or "Other ambulance attendance" to [1] then:
F Were there any delays in the transfer to hospital by ambulance?

◯ Yes ◯ No ◯ Unable to answer

4b. If answered "Yes" to [4a] then:
F please provide details:

Presentation to Hospital

5a. F In your opinion did any triage or streaming process delay assessment?

◯ Yes ◯ No ◯ Unable to answer

5b. If answered "Yes" to [5a] then:
F If Yes, please expand on your answer (delay in triage)

Initial Assessment in Vascular Specialist "hub" hospital

6. F In your opinion was the grade / specialty of the person making the initial clinical assessment appropriate?

◯ Yes ◯ No ◯ Unable to answer

7a. F26a In your opinion, were there delays in the initial assessment at the hub hospital

◯ Yes ◯ No ◯ Unknown

7b. If answered "Yes" to [7a] then:
F26b Duration and details of delays

8a. F In your opinion, was the initial assessment satisfactory?
in terms of timeframe and content

◯ Yes ◯ No ◯ Unable to answer

8b. If answered "No" to [8a] then:
F In your opinion did this impact the outcome?

◯ Yes ◯ No ◯ Unable to answer

9. F10 In the emergency department, was the case discussed with the duty / on call senior vascular surgeon or Interventional radiologist?

◯ Yes ◯ No
◯ NA- patient not admitted via the ED ◯ Unknown

If not listed above, please specify here...

10a. If answered "Yes" to [9] then:
F12 In your opinion, was the initial treatment plan appropriate?

◯ Yes ◯ No ◯ Unknown

10b. If answered "No" to [10a] then:
F13 What could have been done better?

11a. F In your opinion, were all necessary investigations/ imaging performed?

◯ Yes ◯ No ◯ Unable to answer

11b. If answered "No" to [11a] then:
F Which of the following investigations was missing?
ie should have been carried out for this patient but was not

☐ Vascular Ultrasound ☐ CTA ☐ MRA ☐ ECG
☐ Doppler

Please specify any additional options here...

12a. F In your opinion, were any investigations/imaging performed unnecessarily?

◯ Yes ◯ No ◯ Unable to answer

12b. If answered "Yes" to [12a] then:
Which of the following investigations were carried out unnecessarily?

☐ Vascular ultrasound ☐ CT arteriogram ☐ MR arteriogram ☐ ECG

Please specify any additional options here...

Diagnosis of ALI

13a. F In your opinion was there a delay in the diagnosis of acute limb ischaemia in the Vascular Specialist "hub" hospital"?

◯ Yes
◯ No
◯ Unable to answer
◯ Not applicable- Diagnosis already made prior to arrival

13b. If answered "Yes" to [13a] then:
F Please provide details (delay in diagnosis)

14a. F17 Was the Rutherford Acute Limb Ischaemia category documented (at the Hub hospital)?

◯ Yes ◯ No ◯ Unknown

14b. If answered "No" to [14a] then:
F If No, based on the symptoms please estimate the Rutherford score at this time:

◯ I -Limb viable not immediately threatened
◯ IIa- Limb marginally threatened, salvageable if promptly treated
◯ IIb- Limb immediately threatened, salvageable with immediate re-vascularization
◯ III- Limb irreversibly damaged, major tissue loss/ permanent nerve damage inevitable
◯ Unknown

If not listed above, please specify here...

14c. If answered "Yes" to [14a] then:
F If YES was the Rutherford score correct?

◯ Yes ◯ No ◯ Unable to answer

14d. If answered "Yes" to [14a] then:
F18 What was it?

◯ I ◯ IIa ◯ IIb ◯ III

14e. If answered "No" to [14c] then:
F If the score was incorrect, based on the symptoms please estimate the Rutherford score at this time:

◯ I ◯ IIa ◯ IIb ◯ III

14f. F In your opinion, was there a delay in senior review?
ST3 (or equivalent)or above

◯ Yes ◯ No ◯ Unable to answer

14g. If answered "Yes" to [14f] then:
Please give details (delay senior review)

15a. F Did the patient undergo a consultant review prior to undergoing a procedure for ALI?

◯ Yes
◯ No
◯ Unable to answer
◯ Not applicable (no consultant review but no procedure)

15b. If answered "No" to [15a] then:
F If not reviewed by a consultant, in your opinion, should this patient have been?

◯ Yes ◯ No ◯ Unable to answer

16. F Was this patient started on a dedicated pathway (eg documentation proforma) for Acute Limb Ischaemia (ALI)?

◯ Yes ◯ No ◯ Unable to answer

17. F Was this patient admitted to a ward in the Vascular Specialist "Hub" hospital?

◯ Yes- this was appropriate for this patient
◯ Yes but in my opinion, they should not have
◯ No - this patient went straight to theatre and this was appropriate
◯ No - this patient went straight to theatre but this was not appropriate
◯ Unknown

If not listed above, please specify here...

Decision making - treatment planning

18a. Was the patient's care plan discussed with appropriate clinicians?

◯ Yes ◯ No ◯ Unable to answer

18b. If answered "No" to [18a] then:
If not, please explain

19a. Did this discussion occur within an appropriate timeframe?

◯ Yes ◯ No ◯ Unable to answer

19b. If answered "No" to [19a] then:
If no, please give details (timeframe of discussion)

20a. F In your opinion was there a delay in the decision making/ treatment planning for this patient?

◯ Yes ◯ No ◯ Unable to answer

20b. If answered "Yes" to [20a] then:
F Please provide details (delay in decision making)

20c. If answered "Yes" to [20a] then:
F Did the delay in decision making/ treatment planning impact on the outcome for the patient?

◯ Yes ◯ No ◯ Unable to answer

Medical Management in "Hub" Hospital

21a. F In your opinion, did the patient receive appropriate medical interventions to treat acute limb ischaemia (in the Vascular specialist "hub" hospital?

◯ Yes ◯ No ◯ Unable to answer

21b. If answered "No" to [21a] then:
F Please provide details (inappropriate/ missing medical interventions)

22a. F Did the patient receive appropriate analgesia (in the vascular specialist "hub" hospital)

◯ Yes ◯ No ◯ Unable to answer

22b. If answered "No" to [22a] then:
F Please provide details (analgesia)

23a. F29a In your opinion, was there a delay in the starting of any of these treatments?

◯ Yes ◯ No ◯ Unknown

23b. If answered "Yes" to [23a] then:
F29b Please give duration and detail of delays

Procedure 1

If this patient had no surgical/IR procedures or received palliative care only, please select 'NO' for Question 1 of Sections G and H, then skip to Section I.

2a. G0a Did this patient undergo a surgical/IR/hybrid procedure

◯ Yes ◯ No ◯ Unknown

2b. If answered "No" to [2a] then:
G In your opinion, was it an appropriate decision to not treat this patient with surgery/ IR procedure?

◯ Yes ◯ No ◯ Unable to answer

2c. If answered "No" to [2b] then:
G0c Please give details

3a. If answered "Yes" to [2a] then:
H In your opinion, was consent taken appropriately?

◯ Yes ◯ No ◯ Unable to answer ◯ Not applicable

3b. If answered "No" to [2a] then:
G If No, Please provide details (inappropriate consent process)

4a. If answered "Yes" to [2a] then:
G6 Which procedure was done?

- ☐ Percutaneous catheter-directed thrombolytic therapy
- ☐ Surgical: Fogarty / bypass
- ☐ Thrombolysis
- ☐ Femoral endartectomy
- ☐ Angioplasty
- ☐ IR Mechanical Thrombectomy
- ☐ Surgical thromboembolectomy
- ☐ Hybrid mechanical approach: Fogarty / Over the wire embolectomy/ thrombectomy
- ☐ Stent/ stent grafts
- ☐ Unknown
- ☐ Amputation

Please specify any additional options here...

4b. If answered "Amputation" to [4a] then:
Type of amputation

- ◯ Above knee
- ◯ Below knee
- ◯ Above elbow
- ◯ Below elbow
- ◯ Transmetatarsal
- ◯ Digital

If not listed above, please specify here...

4c. If answered "Yes" to [2a] then:
H In your opinion, was the correct procedure performed?

- ◯ Yes
- ◯ No
- ◯ Unable to answer

4d. If answered "No" to [4a] then:
G Please provide details (incorrect procedure)

4e. If answered "No" to [4a] then:
G In your opinion, could this have impacted on the outcome for this patient?

- ◯ Yes
- ◯ No
- ◯ Unable to answer

4f. If answered "Yes" to [4e] then:
G Please provide details (incorrect procedure impact outcome)

5a. If answered "Yes" to [2a] then:
G3 Location procedure done

- ◯ Hybrid theatre
- ◯ Surgical theatre
- ◯ Radiology theatres
- ◯ Surgical theatre with mobile image intensifier
- ◯ Unknown

If not listed above, please specify here...

5b. If answered "Yes" to [2a] then:
G In your opinion, was the procedure performed in the correct location?

- ◯ Yes
- ◯ No
- ◯ Unable to answer

5c. If answered "No" to [5b] then:
G Please provide details (incorrect location)

6a. If answered "Yes" to [2a] then:
G Was the grade of the operating clinician appropriate?

- ◯ Yes
- ◯ No
- ◯ Unable to answer

6b. If answered "Yes" to [2a] then:
G Was the specialty of the operating clinician appropriate?

- ◯ Yes
- ◯ No
- ◯ Unable to answer

7. If answered "Yes" to [2a] then:
G Was the grade of anaesthetist appropriate?

◯ Yes ◯ No ◯ Unable to answer

8a. If answered "Yes" to [2a] then:
G7a Were there any delays in the procedure being carried out?
From when the decision to carry out a procedure had been made

◯ Yes ◯ No ◯ Unable to answer

8b. If answered "Yes" to [8a] then:
G7b The delay was due to:
Answers may be multiple, please select all that apply

- ☐ Medical stabilisation
- ☐ Availability of theatre space
- ☐ Availability of IR space
- ☐ Availability of Surgeon/ Interventional Radiologist
- ☐ Availability of nursing staff
- ☐ NDC/ decision making
- ☐ Patient decision
- ☐ Change of on-call team
- ☐ Unknown / Not recorded

Please specify any additional options here...

8c. If answered "Yes" to [8a] then:
G Please provide details (delay procedure)

8d. If answered "Yes" to [8a] then:
G Did this delay impact the outcome?

◯ Yes ◯ No ◯ Unable to answer

Post-Procedure

9a. If answered "Yes" to [2a] then:
G8a Was the limb condition assessed and documented immediately post procedure?

◯ Yes ◯ No ◯ Unknown ◯ Not applicable

9b. If answered "Yes" to [2a] and "Yes" to [9a] then:
G8b Did the limb condition improve?

◯ Yes ◯ No ◯ Unknown

10a. If answered "Yes" to [2a] then:
G19 In your opinion, was the patient transferred to the most appropriate location following surgery/ IR?

◯ Yes ◯ No ◯ Unable to answer

10b. If answered "No" to [10a] then:
G20 Please expand on your answer.

11a. If answered "Yes" to [2a] then:
G10a Were there any complications following this procedure?

◯ Yes ◯ No ◯ Unknown

11b. If answered "Yes" to [11a] then:
G In your opinion, were any complications avoidable?

◯ Yes ◯ No ◯ Unable to answer

11c. If answered "Yes" to [11a] then:
G In your opinion, were the complications managed appropriately?

◯ Yes ◯ No ◯ Unable to answer

11d. If answered "Yes" to [11a] then:
G10c In your opinion, did the complications affect the outcome of this patient?

◯ Yes ◯ No ◯ Unknown

11e. If answered "Yes" to [11d] then:
G10d Please give details

12. If answered "Yes" to [2a] then:
G18 Was an appropriate monitoring/ escalation plan for deterioration documented?

◯ Yes - a complete plan documenting frequency of monitoring and escalation protocols was enacted
◯ Yes, but incomplete plan
◯ Monitoring plan without escalation protocols
◯ Escalation plan but no complete monitoring plan
◯ Unknown

If not listed above, please specify here...

13. If answered "Yes" to [2a] then:
G15a Did this patient receive appropriate analgesia perioperatively?

◯ Yes ◯ No ◯ Unable to answer

14. If answered "Yes" to [2a] then:
G16 Did this patient receive appropriate anticoagulation i.e. IV heparin , LMWH heparin, DOAC/NOAC, warfarin

◯ Yes ◯ No ◯ Unable to answer ◯ Not applicable

1a. H1 Did this patient require further surgical/IR interventions?

◯ Yes ◯ No ◯ Unable to answer

1b. If answered "Yes" to [1a] then:
H Did they undergo subsequent procedures?

◯ Yes ◯ No ◯ Unable to answer

1c. If answered "No" to [1b] and "Yes" to [1a] then:
H1b Please give details (why no subsequent procedures)

Procedure 2
RE: 2nd procedure performed to treat ALI

2a. If answered "Yes" to [1b] then:
H In your opinion, was consent taken appropriately?

◯ Yes ◯ No ◯ Unable to answer ◯ Not applicable

2b. If answered "No" to [2a] then:
H If No, Please provide details (inappropriate consent process)

3. If answered "Yes" to [1a] then:
H3b Which procedure was carried out?
2nd procedure

- ☐ Percutaneous catheter-directed thrombolytic therapy
- ☐ Surgical: Fogarty / bypass
- ☐ Thrombolysis
- ☐ Femoral endartectomy
- ☐ Angioplasty
- ☐ IR Mechanical Thrombectomy
- ☐ Surgical thromboembolectomy
- ☐ Hybrid mechanical approach: Fogarty / Over the wire embolectomy/ thrombectomy
- ☐ Stent/ stent grafts
- ☐ Unknown
- ☐ Amputation

Please specify any additional options here...

4a. If answered "Yes" to [1b] then:
H In your opinion, was the correct procedure performed?

◯ Yes ◯ No ◯ Unable to answer

4b. If answered "No" to [4a] then:
H Please provide details (incorrect procedure)

4c. If answered "No" to [4a] then:
H Please provide details (incorrect procedure impact outcome)

5a. If answered "Yes" to [1b] then:
H In your opinion, was the procedure performed in the correct location?

◯ Yes ◯ No ◯ Unable to answer

5b. If answered "No" to [5a] then:
H Please provide details (incorrect location)

6a. If answered "Yes" to [1b] then:
H Was the grade of the operating clinician appropriate?

◯ Yes ◯ No ◯ Unable to answer

6b. If answered "Yes" to [1b] then:
H Was the specialty of the operating clinician appropriate?

◯ Yes ◯ No ◯ Unable to answer

6c. If answered "Yes" to [1b] then:
H Was the grade of anaesthetist appropriate?

◯ Yes ◯ No ◯ Unable to answer

7a. If answered "Yes" to [1b] then:
H9a Was there a delay in the 2nd procedure being carried out?

◯ Yes ◯ No ◯ Unable to answer

7b. If answered "Yes" to [7a] then:
H9b The delay was due to

☐ Medical stabilisation ☐ Lack of theatre space ☐ Lack of IR space
☐ Lack of medical staff ☐ Lack of nursing staff ☐ Unknown / Not recorded

Please specify any additional options here...

7c. If answered "Yes" to [7a] then:
H did this delay impact the outcome?

◯ Yes ◯ No ◯ Unable to answer

7d. If answered "Yes" to [7c] then:
H Please provide details: (delay affect outcome)

Post-Procedure 2

8a. If answered "Yes" to [1a] then:
H10a Was the limb condition assessed and documented immediately post-procedure?

◯ Yes ◯ No ◯ Unknown ◯ Not applicable

8b. If answered "Yes" to [8a] then:
H10b Did the limb condition improve?

◯ Yes ◯ No ◯ Unknown

9. If answered "Yes" to [1a] then:
H21a In your opinion, was the patient transferred to the most appropriate location following surgery/ IR?

◯ Yes ◯ No ◯ Unable to answer

10a. If answered "Yes" to [1a] then:
H12a Were there any complications of the procedure

◯ Yes ◯ No ◯ Unknown

10b. If answered "Yes" to [10a] then:
H In your opinion, were any complications avoidable?

◯ Yes ◯ No ◯ Unable to answer

10c. If answered "Yes" to [10a] then:
H12c In your opinion, did the complications affect the outcome of this patient?

◯ Yes ◯ No ◯ Unknown

10d. If answered "Yes" to [10c] then:
H12d Please give details

11. If answered "Yes" to [1b] then:
H Was an appropriate monitoring/ escalation plan for deterioration documented?

◯ Yes - a complete plan documenting frequency of monitoring and escalation protocols was enacted
◯ Yes, but incomplete plan
◯ Monitoring plan without escalation protocols
◯ Escalation plan but no complete monitoring plan
◯ Unknown

If not listed above, please specify here...

12. If answered "Yes" to [1a] then:
H17a Did this patient receive appropriate analgesia post-operatively?

◯ Yes ◯ No ◯ Unable to answer

13. If answered "Yes" to [1a] then:
H18 Did the patient receive appropriate anticoagulation i.e. IV heparin , LMWH heparin, DOAC/NOAC, warfarin

◯ Yes ◯ No ◯ Unable to answer

Procedure 3 etc

14. If answered "Yes" to [1a] then:
H22 Did this patient undergo further surgical/IR interventions?

◯ Yes ◯ No ◯ Unknown

15a. If answered "Yes" to [14] then:
H27 Procedures performed (after 1st 2 procedures)

- ☐ Percutaneous catheter-directed thrombolytic therapy
- ☐ Thrombolysis
- ☐ IR Mechanical Thrombectomy
- ☐ Mechanical thombus extraction
- ☐ Surgical: Fogarty / bypass
- ☐ Surgical thromboembolectomy
- ☐ Endartectomy
- ☐ Bypass surgery
- ☐ Hybrid mechanic approach: Fogarty / Over the wire embolectomy/ thrombectomy and Rx underlying le
- ☐ Amputation: AK/ EKA/ Trans-metatarsal/ digital/ other
- ☐ Stents
- ☐ Angioplasty
- ☐ Unknown

Please specify any additional options here...

15b. If answered "Yes" to [14] then:
Hb In your opinion, was the correct procedure performed?

◯ Yes ◯ No ◯ Unable to answer

16a. If answered "Yes" to [14] then:
Hb In your opinion, was consent taken appropriately?

◯ Yes ◯ No ◯ Unable to answer

16b. If answered "No" to [16a] then:
Hb If No, Please provide details (inappropriate consent process)

17a. If answered "Yes" to [14] then:
H25 Location procedure done

◯ Hybrid theatre ◯ Radiology theatres
◯ Surgical theatre ◯ Surgical theatre with mobile image intensifier
◯ Unknown

If not listed above, please specify here...

17b. If answered "Yes" to [14] then:
Hb In your opinion, was the procedure performed in the correct location?

◯ Yes ◯ No ◯ Unable to answer

18a. If answered "Yes" to [14] then:
H28a Was there a delay in the procedure being carried out?

◯ Yes ◯ No ◯ Unable to answer

18b. If answered "Yes" to [18a] then:
H28b The delay was due to

☐ Medical stabilisation ☐ Lack of theatre space ☐ Lack of IR space
☐ Lack of medical staff ☐ Lack of nursing staff ☐ Unknown / Not recorded

Please specify any additional options here...

18c. If answered "Yes" to [18a] then:
Hb did this delay impact the outcome?

◯ Yes ◯ No ◯ Unable to answer

19a. If answered "Yes" to [14] then:
Hb In your opinion, was the patient transferred to the most appropriate location following surgery/ IR

◯ Yes ◯ No ◯ Unable to answer

19b. If answered "Yes" to [14] then:
H31a Was the limb condition assessed and documented immediately post-procedure?

◯ Yes ◯ No ◯ Unknown ◯ Not applicable

19c. If answered "Yes" to [19b] then:
H31b Did the limb condition improve?

◯ Yes ◯ No ◯ Unknown

20a. If answered "Yes" to [14] then:
Hb Were there any complications following this procedure?

◯ Yes ◯ No ◯ Unable to answer

20b. If answered "Yes" to [20a] then:
Hb In your opinion, were the complications managed appropriately?

◯ Yes ◯ No ◯ Unable to answer

20c. If answered "Yes" to [20a] then:
Hb In your opinion, were any complications avoidable?

◯ Yes ◯ No ◯ Unable to answer

20d. If answered "Yes" to [20a] then:
Hb In your opinion, did the complications affect the outcome of this patient?

◯ Yes ◯ No ◯ Unable to answer

21a. If answered "Yes" to [14] then:
Hb Did this patient receive appropriate analgesia perioperatively/ post-operatively?

◯ Yes ◯ No ◯ Unable to answer

21b. If answered "Yes" to [14] then:
Hb Did the patient receive appropriate anticoagulation i.e. IV heparin , LMWH heparin, DOAC/NOAC, warfarin

◯ Yes ◯ No ◯ Unable to answer

I. Discharge Planning & Follow Up

1. Date/ time of discharge from hospital (or death)

☐ Unknown

2. Discharge location

- ◯ Usual residence
- ◯ Home with package of care
- ◯ Nursing / residential home
- ◯ Died in hospital
- ◯ Step-down / Rehabilitation unit
- ◯ Back to "spoke" hospital that referred the patient
- ◯ Other inpatient unit
- ◯ Unknown

If not listed above, please specify here...

3a. If answered "Usual residence", "Home with package of care", "Nursing / residential home", "Step-down / Rehabilitation unit", "Back to "spoke" hospital that referred the patient", "Other inpatient unit" or "Unknown" to [2] then:
I Any room for improvement in the discharge planning for this patient?

◯ Yes ◯ No ◯ Unable to answer

3b. If answered "Yes" to [3a] then:
I Please give details (RFI DCplanning)

4a. I Did the patient die during this hospital admission?

◯ Yes ◯ No ◯ Unable to answer

4b. If answered "Yes" to [4a] then:
I Is the death certificate present in the case note record?

◯ Yes ◯ No

4c. If answered "Yes" to [4b] then:
I what was listed as the cause of death (primary/ secondary)

4d. If answered "Yes" to [4a] then:
I In your opinion, was the death avoidable?

◯ Yes ◯ No ◯ Unable to answer

4e. If answered "Yes" to [4a] then:
In your opinion, was the patient's death predictable?

◯ Yes ◯ No ◯ Unable to answer

4f. If answered "Yes" to [4a] then:
Was any palliative care provided for this patient?

◯ Yes ◯ No ◯ Unable to answer

4g. If answered "Yes" to [4f] then:
Please give details of palliative care provided

5. If answered "No" to [4a] then:
J9 Did the patient die within 30 days of admission

◯ Yes ◯ No ◯ Unknown

6a. If answered "No" to [4a] then:
I Is there a discharge summary in the case notes?

◯ Yes ◯ No ◯ Unable to answer

6b. If answered "Yes" to [6a] then:
I In your opinion, is anything missing from the discharge summary?

◯ Yes ◯ No ◯ Unable to answer

6c. If answered "Yes" to [6b] then:
I What is missing from the discharge summary:
Please select all that apply

- ☐ Diagnosis
- ☐ Details of procedure/s performed
- ☐ Wound care advice
- ☐ Referrals to community services
- ☐ Referral for psychological support
- ☐ Risk of return of symptoms
- ☐ Telephone number for patient to call if they have problems as a result
- ☐ Details of follow-up appointment with vascular surgeon
- ☐ Medications prescribed at discharge
- ☐ Case worker's details

Please specify any additional options here...

7a. If answered "No" to [4a] then:
J4 Long term risk management

- ☐ None documented
- ☐ Smoking cessation
- ☐ Occupational Therapy
- ☐ Lipid lowering
- ☐ Exercise
- ☐ Vaping cessation
- ☐ Physiotherapy
- ☐ Diabetes management
- ☐ Antiplatelets
- ☐ COMPASS regimen
- ☐ Anti-coagulation
- ☐ Unknown

Please specify any additional options here...

7b. If answered "No" to [4a] then:
I Was the longterm risk management/ surveilance appropriate?

◯ Yes ◯ No ◯ Unable to answer

7c. If answered "Usual residence", "Home with package of care", "Nursing / residential home", "Step-down / Rehabilitation unit", "Back to "spoke" hospital that referred the patient", "Other inpatient unit" or "Unknown" to [2] and "No" to [7b] then:
I Please provide details on where the risk management/ surveillange was inappropriate post discharge

8a. If answered "No" to [4a] then:
J6 Was an outpatient follow up appointment arranged at the time of discharge?

◯ Yes ◯ No ◯ Unknown

8b. If answered "No" to [8a] then:
I If NO, in your opinion, should there have been?

◯ Yes ◯ No ◯ Unable to answer

8c. If answered "Yes" to [8a] then:
I In your opinion, did the follow up appointment happen at the right time?

◯ Yes ◯ No
◯ Unable to answer ◯ N/A - no FU appointment was offered

9a. I Was this case discussed at a morbidity & mortality (M&M) meeting?

◯ Yes ◯ No ◯ Unable to answer

9b. If answered "No" to [9a] then:
I If NO, in your opinion, should it have been?

◯ Yes ◯ No ◯ Unable to answer

9c. If answered "Yes" to [9b] then:
I If YES, please provide details (not dc at M&M)

10a. If answered "No" to [4a] then:
Was the patient readmitted to hospital within 30 days

◯ Yes ◯ No ◯ Unknown

10b. If answered "Yes" to [10a] then:
Date and reason

11a. Throughout the admission, in your opinion was there adequate communication with (and information given to)to the patient and their family?
eg discussions/ updates recorded in the notes

◯ Yes ◯ No ◯ Unable to answer

11b. If answered "No" to [11a] then:
I* Please give details:

J. Overall Quality of care

GOOD PRACTICE: A standard that you would accept 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 below that you would accept from yourself, your trainees and your institution. INSUFFICIENT DATA: Insufficient information submitted to NCEPOD to assess the quality of care

1. Please rate the overall quality of care using the grading system provided:

- ◯ Good practice
- ◯ Room for improvement - clinical aspects of care
- ◯ Room for improvement organisational aspect of care
- ◯ Room for improvement - both clinical and organisational aspects of care
- ◯ Less than satisfactory
- ◯ Insufficient data to answer

2. If answered "Good practice", "Room for improvement - clinical aspects of care", "Room for improvement organisational aspect of care", "Room for improvement - both clinical and organisational aspects of care" or "Less than satisfactory" to [1] then:
Please provide reasons for this grade:

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

◯ Yes ◯ No

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

Cause for concern

Occasionally NCEPOD will refer cases that have been identified as 'LESS THAN SATISFACTORY' when it is felt that further feedback to the Trust/ Health Board concerned is warranted. This is usually due to an area of concern 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/ Health Board is written to by the Chief Executive of NCEPOD explaining our concerns. This process has been in operation for 10 years and the responses received have always been positive

4. Do you feel that this case should be considered for such action?

◯ Yes ◯ No

Health inequalities

5a. During review of this case did you notice any evidence of one or more health inequality or bias that impacted on the care provided?

◯ Yes ◯ No ◯ Unable to answer

5b. If answered "Yes" to [5a] then:
What health inequalities exist in relation to this patient?
Please select all that apply

- ☐ Age
- ☐ Disability – learning/cognitive
- ☐ Marriage and civil partnership
- ☐ Race
- ☐ Religion or belief
- ☐ Hypertension case finding
- ☐ Sex
- ☐ Sexual orientation
- ☐ Socioeconomic status
- ☐ Disability – physical
- ☐ Gender reassignment
- ☐ Pregnancy and maternity
- ☐ Chronic respiratory disease
- ☐ Early cancer diagnosis
- ☐ English not first languag
- ☐ Geographic deprivation
- ☐ Part of a vulnerable or inclusion health group
- ☐ Severe mental illness

Please specify any additional options here...

5c. If answered "Yes" to [5a] then:
Please provide details on how the health inequalities impacted on the care received

6a. In your opinion, based on the evidence on the case notes, were there any other missed opportunities for intervention or avoidable factors prior to the current admission that could have contributed to the acute presentation at the index admission?

◯ Yes ◯ No ◯ Unable to answer

6b. If answered "Yes" to [6a] then:
If YES, please provide details (missed opportunities/ avoidable factors)