

Acute Limb Ischaemia - Clinician Questionnaire

A. Introduction

What is this study about?

To explore current care pathways for patients with acute limb ischaemia (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.

Definitions

A list of definitions can be found here: <https://www.ncepod.org.uk/pdf/ALI/Definitions.pdf>

"Hub" Hospital: A specialist vascular centre. This is an acute hospital that performs vascular procedures. This may also be referred to as an arterial hub/centre or vascular centre.

"Spoke" Hospital: An acute hospital that does not perform vascular procedures. Acute limb ischaemia patients would be transferred from here to a Hub Hospital for treatment.

Who should complete this questionnaire?

This questionnaire should be completed by the named consultant, or the most appropriate clinician, responsible for the patients care when they were treated for Acute Limb Ischaemia (ALI).

Impact of NCEPOD

Recommendations from NCEPOD reports have had an impact on many areas of healthcare including:

Development of the NICE 'Acutely ill patients in hospital guideline' (CG50) - following publication of the 2005 'An Acute Problem' report.

Appointment of a National Clinical Director for Trauma Care- following publication of 'Trauma: Who Cares?' 2007.

Development of NICE Clinical Guidelines for Acute Kidney Injury, published in 2013 - 'Adding Insult to Injury' 2009.

Development of ICS Standards for the care of adult patients with a temporary Tracheostomy, published 2014 - 'On the right trach?' 2014.

Development of guidelines from the British Society of Gastroenterology: diagnosis and Management of acute lower gastrointestinal bleeding, published 2019 - 'Time to Get Control' 2015.

Development of the British Thoracic Society's Quality Standards for NIV, published 2018 - 'Inspiring Change' 2017.

Questions or help

Further information regarding this study can be found here: <https://www.ncepod.org.uk/ali.html>

If you have any queries about this study or this questionnaire, please contact: ali@ncepod.org.uk or telephone 0207 251 9060.

About NCEPOD

The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) reviews healthcare practice by undertaking confidential studies, and make recommendations to improve the quality of the delivery of care for healthcare professionals and policymakers to implement. Data to inform the studies are collected from NHS hospitals and Independent sector hospitals across England, Wales, Northern Ireland and the Offshore Islands. NCEPOD are supported by a wide range of bodies and the Steering Group consists of members from the Medical Royal Colleges and Specialist Associations, as well as observers from The Coroners Society of England and Wales, and the Healthcare Quality Improvement Partnership (HQIP).

This study was commissioned by The Healthcare Quality Improvement Partnership (HQIP) as

part of the Clinical Outcome Review Programme into Medical & Surgical care.

B. Patient Details

1. Please use this space to provide a brief overview of the episode of care from onset of symptoms to discharge from the vascular specialist "hub"* hospital, including any treatment provided.

**Please see definitions. To be included in the study the patient must be 18 years or over and have had acute limb ischaemia.*

2a. Presenting limb:

Answers may be multiple. Please select all that apply.

- ☐ Right leg ☐ Left leg ☐ Right arm ☐ Left arm

2b. How long prior to admission to the "hub" hospital was the onset of symptoms?

- ☐ Less than 1 hour ☐ >1-3 hours ☐ >3-6 hours ☐ >6-12 hours
☐ >12-24 hours ☐ >1-2 days ☐ >3-4 days ☐ >5-7 days
☐ >1-2 weeks ☐ More than 2 weeks

If not listed above, please specify here...

3a. Age at time of admission to "hub" hospital:

Years ☐ Unknown

Value should be no more than 125

3b. Sex:

- ☐ Male ☐ Female ☐ Other

3c. Ethnicity:

- ☐ White British/White - other
☐ Black/African/Caribbean/Black British
☐ Asian/Asian British (Indian, Pakistani, Bangladeshi, Chinese, other Asian)
☐ Mixed/Multiple ethnic groups
☐ Other ethnic group
☐ Unknown

4. What was the patient's usual place of residence?

- ☐ Own home ☐ Residential home ☐ Nursing home ☐ Homeless
☐ Unknown

If not listed above, please specify here...

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

- ☐ Yes ☐ No ☐ Unknown

6. Please make an estimation of the patient's Rockwood clinical frailty score prior to the admission:

For information on Rockwood frailty score please see definitions or

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?

Answers may be multiple. Please select all that apply.

- | | | |
|--|---|--|
| ☐ Language | ☐ Hearing difficulties | ☐ Learning disability |
| ☐ Learning difficulties | ☐ None | ☐ Visual disability |
| ☐ 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

9a. Did the patient have any other barriers to accessing healthcare for the presenting limb condition?

- ☐ Yes ☐ No ☐ Unknown

9b. If answered "Yes" to [9a] then:

Please give details of any barriers to the patient accessing healthcare:

Risk Factors**1. Which of the following comorbidities did the patient have at the time of presentation?**

Answers may be multiple. Please select all that apply. This list comprises of the Charlson Comorbidity Index as well as other relevant comorbidities.

- | | |
|---|--|
| ☐ None | ☐ Acquired immunodeficiency syndrome (AIDS) |
| ☐ Atrial Fibrillation | ☐ Other arrhythmia |
| ☐ Bronchiectasis | ☐ Coronary artery disease |
| ☐ Chronic liver disease | ☐ Cancer (localised) |
| ☐ Cancer (metastatic) | ☐ Connective tissue disease |
| ☐ Congestive cardiac failure | |
| ☐ Chronic Obstructive Pulmonary Disease (COPD) | |
| ☐ Covid-19 | ☐ Dementia |
| ☐ Diabetes Type 1 | ☐ Diabetes Type 2 |
| ☐ Heart failure | ☐ Hemiplegia |
| ☐ Hypertension | ☐ Leukemia |
| ☐ Lymphoma | ☐ Multiple sclerosis |
| ☐ Moderate or severe kidney disease | ☐ Myocardial infarction |
| ☐ Pulmonary fibrosis | ☐ Peripheral vascular disease |
| ☐ Parkinson's Disease | ☐ Peptic ulcer disease |
| ☐ Transient ischaemic attack (TIA) | ☐ Stroke (previous) |
| ☐ Unknown | |

Please specify any additional options here...

2. Which of the following medications was the patient taking at the time of presentation?

Answers may be multiple. Please select all that apply.

- | | |
|--|--|
| ☐ Dual anti-platelet | ☐ Single anti-platelet |
| ☐ Anti-hypertensives | ☐ Lipid-lowering drugs |
| ☐ Warfarin | ☐ Direct Oral Anticoagulants (DOAC) |
| ☐ Other anticoagulants | ☐ Oral Contraceptive Pill (OCP) |
| ☐ Hormone Replacement Therapy (HRT) | ☐ Tranexamic acid |
| ☐ None | ☐ Unknown |

Please specify any additional options here...

3. Please select the best descriptor of the patient's smoking/ vaping history at the time of presentation:

- ☐ Current smoker
 ☐ Ex-smoker
 ☐ Current vaper
 ☐ Ex-vaper

☐ Never smoked

If not listed above, please specify here...

4. Did the patient have a history of alcohol misuse at the time of presentation?

- ☐ Yes
 ☐ No
 ☐ Unknown

5. Was there a history of IV drug usage (IVDU) at time of presentation?

- ☐ Yes
 ☐ No
 ☐ Unknown

6. Did the patient have a history of cocaine use at the time of presentation?

☐ Yes

☐ No

☐ Unknown

Past Medical History

7a. Has this patient previously had an amputation?

Answers may be multiple. Please select all that apply.

☐ No previous amputation

☐ Right leg

☐ Left leg

☐ Right arm

☐ Left arm

☐ Unknown

Please specify any additional options here...

7b. If answered "Right leg" to [7a] then:

Type of right leg/foot amputation:

☐ Above knee amputation

☐ Below knee amputation

☐ Digital amputation

☐ Transmetatarsal amputation

If not listed above, please specify here...

7c. If answered "Left leg" to [7a] then:

Type of left leg/foot amputation:

☐ Above knee amputation

☐ Below knee amputation

☐ Digital amputation

☐ Transmetatarsal amputation

If not listed above, please specify here...

7d. If answered "Right arm" to [7a] then:

Type of right arm/hand amputation:

☐ Above elbow amputation

☐ Below elbow amputation

☐ Digital amputation

If not listed above, please specify here...

7e. If answered "Left arm" to [7a] then:

Type of left arm/hand amputation:

☐ Above elbow amputation

☐ Below elbow amputation

☐ Digital amputation

If not listed above, please specify here...

8a. Has this patient previously had surgical or endovascular treatment in the presenting limb?

☐ Yes

☐ No

☐ Unknown

8b. If answered "Yes" to [8a] then:

Please give details of previous surgical or endovascular treatment in presenting limb:

Answers may be multiple. Please select all that apply.

- ☐ Percutaneous catheter-directed thrombolytic therapy
- ☐ Surgical: Fogarty/ bypass
- ☐ Thrombolysis
- ☐ Surgical thromboembolectomy
- ☐ Angioplasty
- ☐ Femoral endarterectomy
- ☐ IR mechanical thrombectomy
- ☐ Stent/ Stent grafts
- ☐ Hybrid mechanical approach (Fogarty / over the wire embolectomy/ thrombectomy)
- ☐ Unknown

Please specify any additional options here...

9a. Has this patient previously had any surgical or endovascular treatment in any of their other (non-presenting) limbs?

- ☐ Yes ☐ No ☐ Unknown

9b. If answered "Yes" to [9a] then:

Please give details of previous surgical or endovascular treatment in the other (non-presenting) limb:

- ☐ Percutaneous catheter-directed thrombolytic therapy
- ☐ Surgical: Fogarty/ bypass
- ☐ Thrombolysis
- ☐ Surgical thromboembolectomy
- ☐ Angioplasty
- ☐ Femoral endarterectomy
- ☐ IR mechanical thrombectomy
- ☐ Stent/ Stent grafts
- ☐ Hybrid mechanical approach (Fogarty / over the wire embolectomy/ thrombectomy)
- ☐ Unknown

Please specify any additional options here...

10a. Did the patient have a known or suspected infection of the presenting limb?

- ☐ Yes ☐ No ☐ Unknown

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

What type of infection?

Answers may be multiple. Please select all that apply.

- ☐ Infected bypass graft ☐ Infected stent / stent graft ☐ Unknown

Please specify any additional options here...

11a. Did the patient have a history of aneurysmal disease in the presenting limb?

- ☐ Yes ☐ No ☐ Unknown

11b.If answered "Yes" to [11a] then:

What kind of aneurysmal disease?

Answers may be multiple. Please select all that apply.

☐ Aortic

☐ Iliac

☐ Femoral

☐ Popliteal

Please specify any additional options here...

12a.What was the prior condition of the presenting limb?

This is prior to the onset of acute limb ischaemia i.e more than two weeks before presentation and treatment.

☐ Asymptomatic

☐ Intermittent Claudication

☐ Rest pain

☐ Tissue loss / gangrene / ulceration

Please specify any additional options here...

12b.If answered "Intermittent Claudication", "Rest pain" or "Tissue loss / gangrene / ulceration" to [12a] then:

For how many weeks had the patient experienced these symptoms at the time of presentation?

13a.Has this patient had a past episode of acute limb ischaemia (ALI)?

This is outside of the current presentation i.e. more than two weeks before

☐ Yes

☐ No

☐ Unknown

13b.If answered "Yes" to [13a] then:

When did they experience this?

☐ Not Applicable

☐ Unknown

13c.If answered "Yes" to [13a] then:

Please describe the treatment received and the outcome?

D. Care Prior to Hospital Presentation

Care prior to presentation of the patient to the "hub" hospital / vascular centre (if admitted directly) or to the "spoke" hospital (if they were then transferred to "hub" hospital for treatment).

1. In the 2 weeks prior to the presentation of ALI that resulted in the hospital (index) admission, was the patient seen / given advice by any healthcare professionals in relation to the presenting limb condition?

☐ Yes

☐ No

☐ Unknown

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

Which of the following did the patient present to?

Answers may be multiple. Please select all that apply.

☐ GP / Primary Care

☐ NHS 111

☐ Emergency Department attendance

☐ Ambulance attendance (not taken to ED)

☐ Ambulance attendance (blue light ambulance to ED)

☐ Other ambulance attendance

☐ Vascular surgery clinic attendance

☐ Podiatry clinic attendance

☐ Other outpatient clinic attendance

Please specify any additional options here...

2b. If answered "GP / Primary Care" to [2a] then:

Date and time of GP / Primary Care contact:

If time not known, please just include date

☐ Unknown

2c. If answered "NHS 111" to [2a] then:

Date and time of NHS 111 contact:

If time unknown, please just include date

☐ Unknown

2d. If answered "Other ambulance attendance" to [2a] then:

Date and time of other ambulance attendance:

If time unknown, please just include date

☐ Unknown

2e. If answered "Ambulance attendance (blue light ambulance to ED)" to [2a] then:

Date and time of ambulance attendance (blue light ambulance to ED):

If time unknown, please just include date

☐ Unknown

2f. If answered "Ambulance attendance (not taken to ED)" to [2a] then:

Date and time of ambulance attendance (not taken to ED):

If time unknown, please just include date

☐ Unknown

3. If answered "Emergency Department attendance" to [2a] then:

Date and time of ED attendance:

This refers to any ED attendance prior to the ED attendance that led to the index admission. If time unknown, please just include date

☐ Unknown

4a. If answered "Vascular surgery clinic attendance" to [2a] then:

Date and time of vascular surgery clinic attendance:

If time unknown, please just include date

☐ Unknown

4b. If answered "Podiatry clinic attendance" to [2a] then:

Date time of Podiatry clinic attendance

☐ Unknown

4c. If answered "Other outpatient clinic attendance" to [2a] then:

Date and time of other outpatient clinic attendance

☐ Not Applicable ☐ Unknown

4d. If answered "Yes" to [1] then:

What was the outcome of these attendances?

5a. If answered "Yes" to [1] then:

Were there any known delays in this patient seeking help for their condition?

☐ Yes

☐ No

☐ Unknown

5b. If answered "Yes" to [5a] and "Yes" to [1] then:

Please give details of delays:

1. Mode of presentation:

- ☐ Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment
- ☐ Presented directly at vascular centre / "hub" hospital for treatment

Please answer the questions in this section in relation to presentation at the spoke hospital. If the patient did not initially present at a "spoke" hospital, please skip to next section.

Ambulance

3a. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Was the patient transferred to hospital by ambulance?

- ☐ Yes ☐ No ☐ Unknown

3b. If answered "Yes" to [3a] then:

When was the ambulance requested?

☐ Unknown

4. If answered "Yes" to [3a] then:

Was 'Acute Limb Ischaemia' mentioned on the patient report form (PRF)?

- ☐ Yes ☐ No ☐ Unknown

Presentation to Hospital

6. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Date and time of arrival in hospital:

☐ Unknown

7. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Date and time first seen by a healthcare professional:

☐ Unknown

Clinical assessment at presentation

8a. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Date and time of initial assessment:

☐ Unknown

8b. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Grade of person undertaking initial assessment:

- ☐ FY1/2
- ☐ ST1/2
- ☐ ST3+
- ☐ Consultant
- ☐ Emergency care practitioner / Advanced care practitioner
- ☐ Physician Associate
- ☐ Nurse
- ☐ Unknown

If not listed above, please specify here...

8c. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Specialty of person undertaking the initial assessment:

- ☐ Emergency medicine ☐ Vascular surgery ☐ Critical care ☐ Unknown

If not listed above, please specify here...

9. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Date and time of first senior emergency medicine review:

*ST3+ or equivalent *Please see definitions. If no senior review, please select not applicable.*

☐ Not Applicable ☐ Unknown

10a. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

In your opinion, was there a delay in presentation to hospital?

- ☐ Yes ☐ No ☐ Unknown

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

Please give details:

11. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Which symptoms were recorded at presentation?

- | | | |
|---|------------------------------------|---------------------------------------|
| ☐ Pain | ☐ Pallor | ☐ Paraesthesia |
| ☐ Paralysis / weakness | ☐ Cold limb | ☐ Unknown |
| ☐ Swollen limb | | |

Please specify any additional options here...

Clinical Examination

12a. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Was a NEWS2 score recorded?

- ☐ Yes ☐ No ☐ Unknown

**12b.If answered "Yes" to [12a] then:
What was the NEWS2 score?**

☐ Unknown

13. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Which of the following were recorded for the presenting limb?

Answers may be multiple. Please select all that apply.

- | | | |
|---|--|------------------------------------|
| ☐ Limb pulses | ☐ Limb power | ☐ Sensation |
| ☐ Compartment Syndrome | ☐ None of these | |

Please specify any additional options here...

**14. If answered "Limb pulses" to [13] then:
On palpation, which limb pulses were present?**

- | | | |
|---|--|--|
| ☐ Absent | ☐ Femoral only | ☐ Femoral and popliteal |
| ☐ One distal pulse | ☐ Two distal pulses | ☐ Radial |
| ☐ Brachial | | |

Please specify any additional options here...

**15. If answered "Limb pulses" to [13] then:
Was a Doppler assessment carried out?**

- ☐ Yes ☐ No ☐ Unknown

**16. If answered "Limb power" to [13] then:
What was the power on a scale of 1 to 5?**

- ☐ 1 ☐ 2 ☐ 3 ☐ 4
☐ 5 ☐ Not Recorded

**17. If answered "Sensation" to [13] then:
What was sensation recorded as?**

- ☐ Normal ☐ Altered ☐ Absent ☐ Unknown

If not listed above, please specify here...

18. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

What was the recorded diagnosis/ differential diagnosis at the time of presentation to the "spoke" hospital:

- | | | |
|--|---|---|
| ☐ Acute limb ischaemia | ☐ Chronic limb ischaemia | ☐ Deep Vein Thrombosis (DVT) |
| ☐ Ruptured Baker's cyst | ☐ Infection | ☐ Non-specific leg pain |

Please specify any additional options here...

19a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Was a Rutherford classification recorded?

Please see definitions or: <https://angiologist.com/rutherford-classification/>

☐ Yes ☐ No ☐ Unknown

19b.If answered "Yes" to [19a] then:

What was the Rutherford classification?

☐ I ☐ IIa ☐ IIb ☐ III

If not listed above, please specify here...

Investigations

20a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Was an electrocardiogram (ECG) performed?

☐ Yes ☐ No ☐ Unknown

20b.If answered "Yes" to [20a] then:

What was the hearth rhythm?

☐ Regular ☐ Atrial Fibrillation ☐ Other arrhythmia ☐ Unknown

If not listed above, please specify here...

21a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Which baseline bloods were taken?

Answers may be multiple. Please select all that apply.

☐ Lactate ☐ Coagulation Screen ☐ Creatinine Kinase ☐ D-Dimer test
☐ Other relevant ☐ Unknown

21b.If answered "Other relevant" to [21a] then:

Please specify which other relevant bloods:

22a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Which of the following investigations were carried out?

Answers may be multiple. Please select all that apply.

☐ Arterial ultrasound ☐ CT arteriogram (CTA) ☐ MR arteriogram (MRA)
☐ Venous ultrasound for DVT

Please specify any additional options here...

22b.If answered "Arterial ultrasound" to [22a] then:

Date and time arterial ultrasound was requested:

☐ Unknown

22c.If answered "Arterial ultrasound" to [22a] then:

Date and time arterial ultrasound was performed:

☐ Unknown

22d.If answered "CT arteriogram (CTA)" to [22a] then:

Date and time CTA requested:

☐ Unknown

22e.If answered "CT arteriogram (CTA)" to [22a] then:

Date and time CTA performed:

☐ Unknown

22f. If answered "MR arteriogram (MRA)" to [22a] then:

Date and time MRA requested:

☐ Unknown

22g.If answered "MR arteriogram (MRA)" to [22a] then:

Date and time MRA performed:

☐ Unknown

22h.If answered "Venous ultrasound for DVT" to [22a] then:

Date and time venous ultrasound for DVT performed:

☐ Unknown

22i. If answered "Venous ultrasound for DVT" to [22a] then:

Date and time venous ultrasound for DVT was requested:

☐ Unknown

22j. If answered to [22a] then:

Date and time other investigation performed:

☐ Unknown

Referral to Hub Hospital (Specialist Vascular Centre)

24a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Was there a discussion with a specialist at the vascular "hub" hospital prior to referral?

☐ Yes

☐ No

☐ Unknown

24b.If answered "Yes" to [24a] then:

Date and time of senior specialist clinical assessment:

☐ Unknown

25. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Date and time of referral to specialist vascular "hub" hospital:

☐ Unknown

26a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Grade of person making referral:

☐ FY1/2

☐ ST1/2

☐ ST3+

☐ Consultant

☐ Emergency care practitioner / Advanced care practitioner

☐ Physician Associate

☐ Nurse

☐ Unknown

If not listed above, please specify here...

26b.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Specialty of person making referral:

- | | | |
|--|--|--------------------------------------|
| ☐ Emergency medicine | ☐ Vascular surgery | ☐ Critical care |
| ☐ Interventional Radiology | ☐ General Surgery | ☐ Acute Medicine |
| ☐ Unknown | | |

If not listed above, please specify here...

27a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Grade of person receiving referral:

- ☐ FY1/2
☐ ST1/2
☐ ST3+
☐ Consultant
☐ Emergency care practitioner / Advanced care practitioner
☐ Physician Associate
☐ Nurse
☐ Unknown

If not listed above, please specify here...

27b.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Specialty of person receiving referral:

- | | | |
|--|--|-------------------------------------|
| ☐ Emergency medicine | ☐ Vascular surgery | ☐ Critical care |
| ☐ Interventional Radiology | ☐ Unknown | |

28. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Which treatments for ALI were initiated pre-transfer?

Answers may be multiple. Please select all that apply.

- | | |
|--|--|
| ☐ None | ☐ Intravenous (IV) Fluids |
| ☐ Oxygen therapy | ☐ Analgesia |
| ☐ IV heparin | ☐ Low Molecular Weight Heparin (LMWH) |
| ☐ Direct Oral Anti Coagulant (DOAC) | ☐ Aspirin |
| ☐ Made nil by mouth | |

Please specify any additional options here...

29. If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Time of departure from "spoke" hospital:

☐ Unknown

30a.If answered "Presented at "spoke" hospital, then transferred to vascular centre / "hub" hospital for treatment" to [1] then:

Was there any known delays in the transfer of the patient from the "spoke" hospital to the "hub" hospital?

- ☐ Yes ☐ No ☐ Unknown

30b.If answered "Yes" to [30a] then:

Please give details: (e.g. waiting for ambulance, patient deterioration, waiting for a bed in receiving hospital):

Presentation to Hospital

2. How did the patient present to the "hub" hospital / specialist vascular centre?

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

If not listed above, please specify here...

3a. If answered "Ambulance attendance, blue light to ED" or "Other ambulance attendance" to [2] then:

Date and time ambulance requested:

☐ Unknown

3b. If answered "Ambulance attendance, blue light to ED" or "Other ambulance attendance" to [2] then:

Was a bypass protocol utilised to transfer the patient directly to the vascular "hub" hospital?

- ☐ Yes ☐ No ☐ Unknown

3c. If answered "Ambulance attendance, blue light to ED" or "Other ambulance attendance" to [2] then:

Was acute limb ischaemia mentioned on the PRF?

- ☐ Yes ☐ No ☐ Unknown

4. Date and time of arrival in hospital:

☐ Unknown

5a. Was there any known delays in the patient presenting to this hospital?

- ☐ Yes ☐ No ☐ Unknown

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

Please give details:

6. Date and time the patient was first seen by a healthcare professional:

(in the vascular "hub" hospital)

☐ Unknown

Clinical Assessment at Presentation

7a. Date and time of the initial assessment:

in the vascular hub hospital

☐ Not Applicable ☐ Unknown

7b. Grade of clinician undertaking the initial assessment:

- ☐ FY1/2
☐ ST1/2
☐ ST3+
☐ Consultant
☐ Emergency care practitioner / Advanced care practitioner
☐ Physician Associate
☐ Nurse
☐ Unknown

7c. Specialty of clinician undertaking the initial assessment:

- ☐ Emergency medicine ☐ Vascular surgery ☐ Interventional radiology
☐ Critical care ☐ Unknown

If not listed above, please specify here...

8. Which of the following symptoms were recorded?

At the time of presentation to the hub hospital. Answers may be multiple. Please select all that apply.

- ☐ Pain ☐ Pallor ☐ Paraesthesia
☐ Paralysis / weakness ☐ Cold limb ☐ Swollen limb
☐ Unknown

Please specify any additional options here...

9a. Was the patient clinically assessed by:

- ☐ A senior vascular/ endovascular surgeon ☐ A senior consultant interventional radiologist

Please specify any additional options here...

9b. If answered "A senior vascular/ endovascular surgeon" or "A senior consultant interventional radiologist" to [9a] then:

Date and time of first senior/ specialist clinical assessment:

- ☐ Unknown

Clinical Examination

11a. Was a NEWS 2 score recorded?

- ☐ Yes ☐ No ☐ Unknown

11b. If answered "Yes" to [11a] then:

What was the NEWS 2 score?

- ☐ Not Applicable ☐ Unknown

12a. Which of the following were recorded for the presenting limb?

Answers may be multiple. Please select all that apply.

- ☐ Limb pulses ☐ Limb power ☐ Sensation
☐ Compartment Syndrome

12b.If answered "Limb pulses" to [12a] then:**On palpation, which limb pulses were present?**

- | | | |
|---|--|--|
| ☐ Absent | ☐ Femoral only | ☐ Femoral and popliteal |
| ☐ One distal pulse | ☐ Two distal pulses | ☐ Radial |
| ☐ Brachial | | |

Please specify any additional options here...

12c.If answered "Limb pulses" to [12a] then:**Was a Doppler assessment carried out?**

- ☐ Yes ☐ No ☐ Unknown

12d.If answered "Limb power" to [12a] then:**What was the power on a scale of 1 to 5?**

- ☐ 1 ☐ 2 ☐ 3 ☐ 4
☐ 5 ☐ Unknown

12e.If answered "Sensation" to [12a] then:**What was sensation recorded as?**

- ☐ Normal ☐ Altered ☐ Absent ☐ Unknown

If not listed above, please specify here...

13. What was the recorded diagnosis/ differential diagnosis at the time of presentation to the hub hospital:

- | | | |
|--|---|---|
| ☐ Acute limb ischaemia | ☐ Chronic limb ischaemia | ☐ Deep Vein Thrombosis (DVT) |
| ☐ Ruptured Baker's cyst | ☐ Infection | ☐ Non-specific leg pain |

Please specify any additional options here...

14a.Was the Rutherford Acute Limb Ischaemia category documented?*Please see definitions or: <https://angiologist.com/rutherford-classification/>*

- ☐ Yes ☐ No ☐ Unknown

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

- ☐ I ☐ IIa ☐ IIb ☐ III

If not listed above, please specify here...

Investigations**15a.Was an ECG performed?**

- ☐ Yes ☐ No ☐ Unknown

15b.If answered "Yes" to [15a] then:**What was the recorded heart rhythm?**

- ☐ Regular ☐ Atrial Fibrillation ☐ Other arrhythmia ☐ Not recorded

16a.Which baseline bloods were taken?*Answers may be multiple. Please select all that apply.*

- | | | | |
|---|---|--|---------------------------------------|
| ☐ Lactate | ☐ Coagulation Screen | ☐ Creatinine Kinase | ☐ D-Dimer test |
| ☐ Other relevant | ☐ Unknown | ☐ None of these | |

**16b.If answered "Other relevant" to [16a] then:
Please specify which other relevant blood:**

17a.Which of the following investigations were carried out?

Answers may be multiple. Please select all that apply.

- | | | |
|--|---|---|
| ☐ Arterial ultrasound | ☐ CT arteriogram | ☐ MR arteriogram |
| ☐ Venous ultrasound (for DVT) | ☐ None of these | |

Please specify any additional options here...

**17b.If answered "Arterial ultrasound" to [17a] then:
Date and time arterial ultrasound performed:**

☐ Unknown

**17c.If answered "CT arteriogram" to [17a] then:
Date and time CTA performed:**

☐ Unknown

**17d.If answered "MR arteriogram" to [17a] then:
Date and time MRA performed:**

☐ Unknown

**17e.If answered "Venous ultrasound (for DVT)" to [17a] then:
Date and time venous ultrasound (for DVT) performed:**

☐ Unknown

**17f. If answered to [17a] then:
F25i Date and time other performed:**

☐ Unknown

Initial Management and Revascularisation plan

18a.Which of the following treatments were initiated in the "hub" hospital?

Answers may be multiple. Please select all that apply.

- | | | |
|---|--|--|
| ☐ Anti-coagulation | ☐ Anti-coagulation monitoring | ☐ Antibiotics |
| ☐ Analgesia | ☐ Intubation /Ventilation | ☐ IV Fluids |
| ☐ Oxygen | ☐ Patient made NBM | ☐ None of these |
| ☐ Unknown | | |

Please specify any additional options here...

**18b.If answered "Anti-coagulation", "Anti-coagulation monitoring", "Antibiotics", "Analgesia", "Intubation /Ventilation", "IV Fluids", "Oxygen" or "Patient made NBM" to [18a] then:
What date and time did the patient first receive treatment for ALI?**

Including eg. anticoagulants or analgesia

☐ Unknown

19a.If answered "Anti-coagulation" to [18a] then:

Which anticoagulation did the patient receive?

Answers may be multiple. Please select all that apply.

- | | |
|-------------------------------------|--|
| ☐ IV heparin | ☐ Low Molecular Weight Heparin (LMWH) |
| ☐ DOAC/NOAC | ☐ Warfarin |

Please specify any additional options here...

19b.If answered "Analgesia" to [18a] then:

Which analgesia did the patient receive?

Answers may be multiple. Please select all that apply.

- | | | | |
|--------------------------------------|---------------------------------------|-------------------------------------|----------------------------------|
| ☐ Paracetamol | ☐ Oral opioids | ☐ IV opioids | ☐ Unknown |
|--------------------------------------|---------------------------------------|-------------------------------------|----------------------------------|

Please specify any additional options here...

20. Date and time of admission to vascular "hub" hospital:

☐ Unknown

21. Which location was the patient first admitted to in the vascular hub hospital?

- | | |
|--|--|
| ☐ Surgical assessment unit | ☐ Medical assessment unit |
| ☐ Acute admissions unit | ☐ General surgical ward |
| ☐ General medical ward | ☐ Specialist surgical ward |
| ☐ Specialist medical ward | ☐ Higher level care ward |
| ☐ Patient went straight to theatre | |

If not listed above, please specify here...

22. What was the date and time of the diagnosis of acute limb ischaemia:

☐ Unknown

23a.Was a revascularisation/ treatment plan formed?

- | | | |
|---------------------------|--------------------------|-------------------------------|
| ☐ Yes | ☐ No | ☐ Unknown |
|---------------------------|--------------------------|-------------------------------|

23b.If answered "Yes" to [23a] then:

When was the revascularisation/ treatment plan formed?

☐ Not Applicable ☐ Unknown

23c.If answered "Yes" to [23a] then:

Who was involved in forming the revascularisation/ treatment plan?

- | | |
|---|---|
| ☐ Vascular/ endovascular surgeon | ☐ Interventional radiologist |
| ☐ Vascular anaesthetist | ☐ General anaesthetist |
| ☐ Unknown | |

Please specify any additional options here...

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

☐ Yes ☐ No ☐ Unknown

2b. If answered "No" to [2a] then:**Why did this patient not undergo a surgical/IR/hybrid procedure?**

☐ Non-surgical/Non-IR management ☐ Palliative care
☐ Death

If not listed above, please specify here...

**2c. If answered "Non-surgical/Non-IR management" or "Palliative care" to [2b] then:
Please give details:**

Procedure 1

If this patient had no surgical/IR procedures or received palliative care only, please skip to section H and select 'NO' for Question 2 then skip to Section I.

if the patient underwent multiple procedures, please answer the questions in this section in relation to their first procedure

3a. If answered "Yes" to [2a] then:**Which procedure was performed?**

- ☐ Percutaneous catheter-directed thrombolytic therapy
☐ Femoral endarterectomy
☐ Thrombolysis
☐ Surgical: Fogarty / bypass
☐ Angioplasty
☐ Surgical thromboembolectomy
☐ IR Mechanical thrombectomy
☐ Stent / stent graft
☐ Hybrid mechanical approach (Fogarty / over the wire embolectomy/ thrombectomy)
☐ Amputation
☐ Unknown

Please specify any additional options here...

3b. If answered "Amputation" to [3a] then:**What type of amputation?**

- ☐ Above knee amputation ☐ Below knee amputation ☐ Transmetatarsal amputation
☐ Right foot digital amputation ☐ Above elbow amputation ☐ Below elbow amputation
☐ Transmetatarsal amputation ☐ Digital amputation

If not listed above, please specify here...

4. If answered "Yes" to [2a] then:**Date and time of arrival in theatre / interventional radiology:**

☐ Unknown

5. If answered "Yes" to [2a] then:
Date and time of start of procedure:

☐ Unknown

6. If answered "Yes" to [2a] then:
Location where the procedure was carried out:

- | | |
|--|--|
| ☐ Hybrid theatre | ☐ Surgical theatre |
| ☐ Radiology theatres | ☐ Surgical theatre with mobile image intensifier |
| ☐ Unknown | |

If not listed above, please specify here...

7a. If answered "Yes" to [2a] then:
Grade of most senior person undertaking procedure:

- | | | | |
|-----------------------------|-----------------------------|----------------------------------|-------------------------------|
| ☐ ST3-5 | ☐ ST6-8 | ☐ Consultant | ☐ Unknown |
|-----------------------------|-----------------------------|----------------------------------|-------------------------------|

If not listed above, please specify here...

7b. If answered "Yes" to [2a] then:
Specialty of person undertaking procedure

- | | |
|--|--|
| ☐ Vascular/ endovascular surgery | ☐ Interventional radiology |
| ☐ Unknown | |

If not listed above, please specify here...

8. If answered "Yes" to [2a] then:
Grade of anaesthetist present during procedure:

- | | | | |
|------------------------------------|----------------------------------|-------------------------------|-----------------------------------|
| ☐ CT1-3 | ☐ CT4-6 | ☐ ST4-7 | ☐ SAS Doctors |
| ☐ Locum/Fellow | ☐ Consultant | ☐ Unknown | |

9a. If answered "Yes" to [2a] then:
Where there any delays in carrying out the procedure?

- | | | |
|---------------------------|--------------------------|-------------------------------|
| ☐ Yes | ☐ No | ☐ Unknown |
|---------------------------|--------------------------|-------------------------------|

9b. If answered "Yes" to [9a] then:
What caused the delay?

Answers may be multiple. Please select all that apply.

- | | | |
|--|--|--|
| ☐ Medical stabilisation | ☐ Lack of theatre space | ☐ Lack of IR space |
| ☐ Availability of medical staff | ☐ Availability of nursing staff | ☐ Patient related delay |
| ☐ Unknown / Not recorded | | |

Please specify any additional options here...

10. If answered "Yes" to [2a] then:
Did the patient have any fasciotomies?

- | | | |
|---------------------------|--------------------------|-------------------------------|
| ☐ Yes | ☐ No | ☐ Unknown |
|---------------------------|--------------------------|-------------------------------|

Post-Procedure

11a.If answered "Yes" to [2a] then:

Was the limb condition assessed and documented immediately post procedure?

- ☐ Yes ☐ No ☐ Unknown ☐ not applicable

11b.If answered "Yes" to [2a] and "Yes" to [11a] then:

Did the limb condition improve?

- ☐ Yes ☐ No ☐ Unknown

12a.If answered "Yes" to [2a] then:

Where was the patient discharged to from theatre (following procedure)?

- ☐ Level 2 - HDU
☐ Level 3 - Critical care
☐ Overnight intensive recovery unit
☐ Vascular surgery ward
☐ Held in theatre recovery (no appropriate bed available)
☐ Unknown

If not listed above, please specify here...

12b.If answered "Yes" to [2a] and "Level 2 - HDU", "Level 3 - Critical care", "Overnight intensive recovery unit" or "Held in theatre recovery (no appropriate bed available)" to [12a] then:

What treatment did the patient receive in higher level care?

Answers may be multiple. Please select all that apply.

- ☐ Respiratory support ☐ Cardiovascular support
☐ Haemodialysis/haemofiltration therapy ☐ Monitoring

Please specify any additional options here...

13a.If answered "Yes" to [2a] then:

Were there any complications following this procedure?

- ☐ Yes ☐ No ☐ Unknown

13b.If answered "Yes" to [13a] then:

Which complications did the patient experience?

Answers may be multiple. Please select all that apply.

- ☐ Compartment syndrome ☐ Acute kidney injury ☐ Reperfusion Syndrome
☐ Infection ☐ Acute lung injury ☐ Ischaemia reperfusion injury
☐ Ischaemic bowel ☐ Death

Please specify any additional options here...

13c.If answered "Yes" to [13a] then:

In your opinion, did the complications affect the outcome of this patient?

- ☐ Yes ☐ No ☐ Unknown

**13d.If answered "Yes" to [13c] then:
Please give details.**

**14. If answered "Yes" to [2a] then:
Was an escalation plan for deterioration documented?**

☐ Yes ☐ Yes, but incomplete ☐ No ☐ Unknown

**15. If answered "Yes" to [2a] then:
What was the frequency of limb assessment in the 24-48hrs following the procedure?**

☐ 0-1 hourly ☐ >1-4 hourly ☐ >4-6 hourly ☐ >6-12 hourly
☐ >12- 24 hourly ☐ > daily ☐ Unknown

If not listed above, please specify here...

**16a.If answered "Yes" to [2a] then:
Did this patient receive analgesia?**

☐ Yes ☐ No ☐ Unknown

**16b.If answered "Yes" to [16a] then:
Which analgesia did the patient receive?**

- ☐ Paracetamol
☐ Oral opioids
☐ IV opioids
☐ Patient controlled analgesia (PCA)/ Nurse controlled analgesia (NCA)
☐ Regional Anaesthesia

Please specify any additional options here...

**17a.If answered "Yes" to [2a] then:
Did this patient receive anticoagulation?**

i.e. IV heparin , LMWH heparin, DOAC/NOAC, warfarin

☐ Yes ☐ No ☐ Unknown

**17b.If answered "Yes" to [17a] then:
What anticoagulation did they receive?**

☐ IV heparin ☐ LMWH ☐ DOAC/NOAC ☐ Warfarin

Please specify any additional options here...

Subsequent Procedures

If this patient did not undergo any (/further) procedures, please select 'NO' for Question 2 and skip to Section I.

2. Did this patient undergo further surgical/IR interventions?

☐ Yes ☐ No ☐ Unknown

Procedure 2**3a. If answered "Yes" to [2] then:****Which procedure was performed?**

The second procedure: Answers may be multiple. Please select all that apply.

- ☐ Percutaneous catheter-directed thrombolytic therapy
- ☐ Femoral endarterectomy
- ☐ Thrombolysis
- ☐ Surgical: Fogarty / bypass
- ☐ Angioplasty
- ☐ Surgical thromboembolectomy
- ☐ IR mechanical thrombectomy
- ☐ Stent/ stent graft
- ☐ Hybrid mechanical approach (Fogarty / over the wire embolectomy/ thrombectomy)
- ☐ Amputation
- ☐ Unknown

Please specify any additional options here...

3b. If answered "Amputation" to [3a] then:**What type of amputation?**

- ☐ Above knee amputation
- ☐ Below knee amputation
- ☐ Transmetatarsal amputation
- ☐ Digital amputation
- ☐ Above elbow amputation
- ☐ Below elbow amputation
- ☐ Transmetatarsal amputation
- ☐ Digital amputation

If not listed above, please specify here...

4. If answered "Yes" to [2] then:**Date and time of arrival in theatre / interventional radiology:**

Second procedure

☐ Unknown

5. If answered "Yes" to [2] then:**Date and time of start of second procedure:**

☐ Unknown

6. If answered "Yes" to [2] then:

Location in which the second procedure was performed:

- ☐ Hybrid theatre ☐ Surgical theatre
☐ Radiology theatre ☐ Surgical theatre with mobile image intensifier
☐ Unknown

If not listed above, please specify here...

7a. If answered "Yes" to [2] then:

Grade of most senior person undertaking the second procedure:

- ☐ ST3-5 ☐ ST6-8 ☐ Consultant ☐ Unknown

If not listed above, please specify here...

7b. If answered "Yes" to [2] then:

Specialty of person undertaking the second procedure:

- ☐ Vascular surgery ☐ Interventional radiology ☐ Unknown

If not listed above, please specify here...

8. If answered "Yes" to [2] then:

Did the patient have any fasciotomies?

- ☐ Yes ☐ No ☐ Unknown

9a. If answered "Yes" to [2] then:

Was there a delay in carrying out the second procedure?

- ☐ Yes ☐ No ☐ Unknown

9b. If answered "Yes" to [9a] then:

What caused the delay?

Answers may be multiple. Please select all that apply.

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

Please specify any additional options here...

Post-Procedure 2

10a. If answered "Yes" to [2] then:

Was the limb condition assessed and documented immediately following the second procedure?

- ☐ Yes ☐ No ☐ Unknown ☐ Not applicable

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

Did the limb condition improve?

- ☐ Yes ☐ No ☐ Unknown

11a.If answered "Yes" to [2] then:

Where was the patient discharged to following the second procedure?

- ☐ Level 2 - HDU
- ☐ Level 3 - Critical care
- ☐ Overnight intensive recovery unit
- ☐ Vascular surgery ward
- ☐ Held in theatre recovery (no appropriate bed available)
- ☐ Unknown

If not listed above, please specify here...

11b.If answered "Yes" to [2] and "Level 2 - HDU", "Level 3 - Critical care", "Overnight intensive recovery unit" or "Held in theatre recovery (no appropriate bed available)" to [11a] then:

What treatment did the patient receive in higher level care?

Answers may be multiple. Please select all that apply.

- | | |
|--|---|
| ☐ Respiratory support | ☐ Cardiovascular support |
| ☐ Haemodialysis/haemofiltration therapy | ☐ Monitoring |
| ☐ Unknown | |

Please specify any additional options here...

12. If answered "Yes" to [2] then:

What was the frequency of limb assessment in the 24-48hrs following the second procedure?

- | | | | |
|-------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| ☐ 0-1 hourly | ☐ >1-4 hourly | ☐ >4-6 hourly | ☐ >6-12 hourly |
| ☐ >12-24 hourly | ☐ >24 hourly | ☐ Unknown | |

If not listed above, please specify here...

13a.If answered "Yes" to [2] then:

Were there any complications following the second procedure?

- ☐ Yes ☐ No ☐ Unknown

13b.If answered "Yes" to [13a] then:

Which complications did the patient have following the second procedure?

Answers may be multiple, please select all that apply

- | | | |
|---|--|---|
| ☐ Compartment syndrome | ☐ Acute kidney injury | ☐ Reperfusion Syndrome |
| ☐ Infection | ☐ Acute lung injury | ☐ Ischaemia reperfusion injury |
| ☐ Ischaemic bowel | | |

Please specify any additional options here...

13c.If answered "Yes" to [13a] then:

In your opinion, did the complications affect the outcome of this patient?

- ☐ Yes ☐ No ☐ Unknown

**13d.If answered "Yes" to [13c] then:
Please give details:**

**14. If answered "Yes" to [2] then:
Was an escalation plan for deterioration documented/ updated following the second procedure?**

☐ Yes ☐ No ☐ Unknown

**15. If answered "Yes" to [2] then:
Were any changes made to the analgesia received following the second procedure?**

☐ Yes ☐ No ☐ Unknown

**16a.If answered "Yes" to [15] then:
Which analgesia did the patient receive?**

☐ Paracetamol ☐ Oral opioids ☐ IV opioids ☐ PCA / NCA

Please specify any additional options here...

**16b.If answered "Yes" to [2] then:
Did the patient receive anticoagulation following the second procedure?
*i.e. IV heparin , LMWH heparin, DOAC/NOAC, warfarin***

☐ Yes
☐ No
☐ Unknown
☐ Not applicable- Patient already receiving anticoagulants

**16c. If answered "Yes" to [16b] then:
What did they receive?**

☐ IV heparin ☐ LMWH ☐ DOAC/NOAC ☐ Warfarin

Please specify any additional options here...

**17. If answered "Yes" to [2] then:
Did this patient undergo further surgical/IR interventions?**

☐ Yes ☐ No ☐ Unknown

Procedure 3

18a.If answered "Yes" to [17] then:

Which procedure was performed?

Third procedure. Answers may be multiple. Please select all that apply.

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

Please specify any additional options here...

18b.If answered "Amputation" to [18a] then:

What type of amputation?

- ☐ Above knee amputation
- ☐ Below knee amputation
- ☐ Transmetatarsal amputation
- ☐ Digital amputation
- ☐ Above elbow amputation
- ☐ Below elbow amputation
- ☐ Transmetatarsal amputation
- ☐ Digital amputation

If not listed above, please specify here...

19. If answered "Yes" to [17] then:

Date and time of arrival in theatre / interventional radiology:

☐ Unknown

20. If answered "Yes" to [17] then:

Date and time of start of third procedure:

☐ Unknown

21. If answered "Yes" to [17] then:

Location in which the third procedure was carried out:

- ☐ Hybrid theatre
- ☐ Radiology theatre
- ☐ Surgical theatre
- ☐ Surgical theatre with mobile image intensifier
- ☐ Unknown

If not listed above, please specify here...

22a.If answered "Yes" to [17] then:

Grade of most senior person undertaking the third procedure:

- ☐ ST3-5
- ☐ ST6-8
- ☐ Consultant
- ☐ Unknown

If not listed above, please specify here...

22b.If answered "Yes" to [17] then:

Specialty of person undertaking the third procedure:

- ☐ Vascular surgery ☐ Interventional radiology ☐ Unknown

If not listed above, please specify here...

23. If answered "Yes" to [17] then:

Did the patient have any fasciotomies?

- ☐ Yes ☐ No ☐ Unknown

24a.If answered "Yes" to [17] then:

Was there a delay in the third procedure being performed?

- ☐ Yes ☐ No ☐ Unknown

24b.If answered "Yes" to [24a] then:

What caused the delay?

Answers may be multiple. Please select all that apply.

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

Please specify any additional options here...

25a.If answered "Yes" to [17] then:

Where was the patient discharged to from theatre following the third procedure?

- ☐ Level 2 - HDU
☐ Level 3 - Critical care
☐ Overnight intensive recovery unit
☐ Vascular surgery ward
☐ Held in theatre recovery (no appropriate bed available)
☐ Unknown

If not listed above, please specify here...

25b.If answered "Yes" to [17] and "Level 2 - HDU" or "Level 3 - Critical care" to [25a] then:
What treatment did they receive?

Answers may be multiple. Please select all that apply.

- | | |
|--|---|
| ☐ Respiratory support | ☐ Cardiovascular support |
| ☐ Haemodialysis/haemofiltration therapy | ☐ Monitoring |
| ☐ Unknown | |

Please specify any additional options here...

26a.If answered "Yes" to [17] then:

Was the limb condition assessed and documented immediately following the third procedure?

- ☐ Yes ☐ No ☐ Unknown ☐ Not applicable

26b.If answered "Yes" to [26a] then:

Did the limb condition improve?

- ☐ Yes ☐ No ☐ Unknown

27. If answered "Yes" to [17] then:

Did the patient receive analgesia following the third procedure?

- ☐ Yes
☐ No
☐ Unknown
☐ Not applicable- Patient already receiving analgesia

28. If answered "Yes" to [17] then:

Did this patient receive anticoagulation following the third procedure?

- ☐ Yes
☐ No
☐ Unknown
☐ Not applicable (Already been given anticoagulants)

29. If answered "Yes" to [17] then:

Did this patient undergo further surgical/IR interventions?

- ☐ Yes ☐ No ☐ Unknown

Procedure 4

30a. If answered "Yes" to [29] then:

Which procedure was performed?

Fourth procedure: Answers may be multiple, please select all that apply

- ☐ Percutaneous catheter-directed thrombolytic therapy
☐ Femoral endarterectomy
☐ Thrombolysis
☐ Surgical: Fogarty/bypass
☐ Angioplasty
☐ Surgical thromboembolectomy
☐ IR Mechanical thrombectomy
☐ Stent/ stent graft
☐ Hybrid mechanical approach (Fogarty / over the wire embolectomy/ thrombectomy)
☐ Amputation
☐ Unknown

Please specify any additional options here...

30b. If answered "Amputation" to [30a] then:

What type of amputation?

- | | |
|---|---|
| ☐ Above knee amputation | ☐ Below knee amputation |
| ☐ Transmetatarsal amputation (foot) | ☐ Digital amputation (foot) |
| ☐ Above elbow amputation | ☐ Below elbow amputation |
| ☐ Digital amputation (hand) | |

If not listed above, please specify here...

31. If answered "Yes" to [29] then:

Date and time of arrival in theatre / interventional radiology:

Fourth procedure

☐ Unknown

32. If answered "Yes" to [29] then:

Date and time of start of fourth procedure:

☐ Unknown

33. If answered "Yes" to [29] then:

Location in which the fourth procedure was carried out:

- ☐ Hybrid theatre
☐ Surgical theatre
☐ Unknown

- ☐ Radiology theatre
☐ Surgical theatre with mobile image intensifier

If not listed above, please specify here...

34. If answered "Yes" to [29] then:

Grade of most senior person undertaking fourth procedure:

- ☐ ST3-5 ☐ ST6-8 ☐ Consultant ☐ Unknown
☐ Other

If not listed above, please specify here...

35. If answered "Yes" to [29] then:

Specialty of person undertaking fourth procedure:

- ☐ Vascular surgery ☐ Interventional radiology ☐ Unknown

If not listed above, please specify here...

36. If answered "Yes" to [29] then:

Did the patient have any fasciotomies?

4th procedure

- ☐ Yes ☐ No ☐ Unknown

37a. If answered "Yes" to [29] then:

Was there a delay in the fourth procedure being carried out?

- ☐ Yes ☐ No ☐ Unknown

37b. If answered "Yes" to [37a] then:

What caused the delay?

4th procedure: Answers may be multiple. Please select all that apply.

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

Please specify any additional options here...

38a.If answered "Yes" to [29] then:

Where was the patient discharged to from theatre following the fourth procedure?

Answers may be multiple. Please select all that apply.

- ☐ Level 2 - HDU
- ☐ Level 3 - Critical care
- ☐ Overnight intensive recovery unit
- ☐ Vascular surgery ward
- ☐ Held in theatre recovery (no appropriate bed available)
- ☐ Unknown

If not listed above, please specify here...

38b.If answered "Level 2 - HDU" or "Level 3 - Critical care" to [38a] then:

What treatment did they receive?

Following 4th procedure. Answers may be multiple. Please select all that apply.

- | | |
|--|---|
| ☐ Respiratory support | ☐ Cardiovascular support |
| ☐ Haemodialysis/haemofiltration therapy | ☐ Monitoring |
| ☐ Unknown | |

Please specify any additional options here...

39a.If answered "Yes" to [29] then:

Was the limb condition assessed and documented immediately following the fourth procedure?

- ☐ Yes ☐ No ☐ Unknown

39b.If answered "Yes" to [39a] then:

Did the limb condition improve?

- ☐ Yes ☐ No ☐ Unknown

40. If answered "Yes" to [29] then:

Did the patient receive analgesia following the fourth procedure?

- ☐ Yes ☐ No ☐ Unknown
- ☐ N/A -analgesia already given

41. If answered "Yes" to [29] then:

Did the patient receive anti-coagulation following the fourth procedure?

- ☐ Yes ☐ No
- ☐ Unknown ☐ N/A - already on anticoagulants

42a.If answered "Yes" to [29] then:

Did this patient undergo any further procedures for their acute limb ischaemia?

- ☐ Yes ☐ No ☐ Unknown

42b.If answered "Yes" to [42a] then:

Please provide details of the procedure/s and any delays or complications that occurred:

--

Discharge from hospital**1a. Discharge location:**

- | | |
|--|---|
| ☐ Usual residence | ☐ Nursing / residential home |
| ☐ Intermediate care | ☐ Transfer back to "Spoke" hospital |
| ☐ Transfer to other hospital | ☐ N/A- Patient died in hospital |
| ☐ Unknown | |

If not listed above, please specify here...

**1b. If answered "N/A- Patient died in hospital" to [1a] then:
What was the cause of death?**

**1c. If answered "N/A- Patient died in hospital" to [1a] then:
What was the date and time of death?**

☐ Unknown

**2a. If answered "Usual residence", "Nursing / residential home", "Intermediate care",
"Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
Did the patient require further care/additional care on discharge?**

- ☐ Yes ☐ No ☐ Unknown

**2b. If answered "Yes" to [2a] then:
Please give details of further/additional care:**

**3. If answered "Usual residence", "Nursing / residential home", "Intermediate care",
"Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
Please make an estimation of the patient's Rockwood Clinical Frailty Score on discharge:**

For more information please see definitions or: 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 | | |

**4. If answered "Usual residence", "Nursing / residential home", "Intermediate care", "Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
What long term risk management was provided on discharge?**

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

Please specify any additional options here...

**5. If answered "Usual residence", "Nursing / residential home" or "Unknown" to [1a] then:
Was ultrasound surveillance arranged?**

- ☐ Yes ☐ No ☐ Unknown

**6a. If answered "Usual residence", "Nursing / residential home", "Intermediate care", "Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
Was an outpatient follow up appointment arranged at the time of discharge?**

- ☐ Yes ☐ No ☐ Unknown

**6b. If answered "Yes" to [6a] then:
Who was the follow-up appointment with?**

- ☐ Vascular surgeon ☐ Vascular nurse

Please specify any additional options here...

**7a. If answered "Usual residence", "Nursing / residential home", "Intermediate care" or "Transfer back to "Spoke" hospital" to [1a] then:
Was the patient given safety net advice on what to do/who to contact if they experienced an acute deterioration?**

- ☐ Yes ☐ No ☐ Unknown

**7b. If answered "Usual residence", "Nursing / residential home" or "Unknown" to [1a] and "Yes" to [7a] then:
What information were they given?**

**8a. If answered "Usual residence", "Nursing / residential home", "Intermediate care", "Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
Was the patient readmitted to hospital within 30 days?**

- ☐ Yes ☐ No ☐ Unknown

**8b. If answered "Yes" to [8a] then:
Please enter the date and reason of readmission:**

**9. If answered "Usual residence", "Nursing / residential home", "Intermediate care", "Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
Did the patient have a major amputation within 30 days of discharge?**

☐ Yes ☐ No ☐ Unknown

**10. If answered "Usual residence", "Nursing / residential home", "Intermediate care", "Transfer back to "Spoke" hospital" or "Unknown" to [1a] then:
Did the patient die within 30 days of admission to hospital?**

☐ Yes ☐ No ☐ Unknown

11a. In your opinion, were there any missed opportunities, delays or room for improvement in the care provided to this patient at any point in the pathway of care?

☐ Yes ☐ No ☐ Unknown

**11b. If answered "Yes" to [11a] then:
Please provide details:**

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE By doing so you have contributed to the dataset that will form the report and recommendations due for release in late 2025