Pulmonary Embolism

National Confidential Enquiry into Patient Outcome and Death (NCEPOD)

CLINICIAN QUESTIONNAIRE

CONFIDENTIAL

DETAILS OF THE CLINICIAN COMPLETING THIS QUESTIONNAIRE

Grade: _____ **Specialty:** _____

What is this study about?

The aim is to explore the overall management of patients diagnosed with pulmonary embolism and to look for remediable factors in the care of these patients.

Inclusions

Patients aged 16 or over who were diagnosed (in any position) with pulmonary embolism (ICD10 codes I26.0 and I26.9) between 1st July 2017 and 31st August 2017 inclusive. Patients that present with symptoms of a pulmonary embolism and those that develop PE as an inpatient are included.

Eligible cases were identified from the hospital central record system (using ICD10 codes). Up to 6 cases per hospital have been selected for review.

How to complete the form:

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

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

Was a treatment escalation decision made?

☒ Yes ☐ No

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

■ Yes ☒ No

CPD accreditation:

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

Questions or help?

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

pulmonaryembolism@ncepod.org.uk or telephone: 020 7251 9060

Further details available on our study web page: http://www.ncepod.org.uk/pe.html

Thank you for taking the time to complete this questionnaire. The findings of the study will be published in summer 2019.

If you would like email confirmation of the completion of this questionnaire and a certificate at the end of the study, please clearly supply your name, job title and email address below.

☐ **I agree to NCEPOD holding my details for the purposes of the study and until the end of the study**

Name: _____ email address _____

Job title: _____

NCEPOD number: | | | | | | |

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DEFINITIONS

AMB score	FACTORS: Female sex, Age<80years, Has access to personal/public transport, IV treatment NOT anticipated by referring doctor, NOT acutely confused, MEWS score = 0, NOT discharged from hospital within previous 30 days. If a factor is applicable to the patient they score 1 point. The maximum score is 7. If the patient has a high score then ambulatory care should be considered
Ambulatory Emergency Care (AEC)	Ambulatory Emergency Care (AEC) is defined by the AEC Network as the provision of same day emergency care for patients being considered for emergency admission. Ambulatory Emergency Care services can also facilitate early supported discharge by offering the option of early clinical review, follow up diagnostics and patient reassurance. However this should not be the main focus of the service.
Levels of ward care	LEVEL 0: Patients whose needs can be met through normal ward care in an acute hospital. LEVEL 1: Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care whose needs can be met on an acute ward with additional advice and support from the critical care team. LEVEL 2: (e.g. HDU) Patients requiring more detailed observation or intervention including support for a single failing organ system or post operative care, and those stepping down from higher levels of care. (NB: When Basic Respiratory and Basic Cardiovascular support are provided at the same time during the same critical care spell and no other organ support is required, the care is considered to be Level 2 care). LEVEL 3: (e.g. ICU) Patients requiring advanced respiratory support alone or basic respiratory support together with support of at least two organs. This level includes all complex patients requiring support for multi-organ failure. (NB: Basic Respiratory and Basic Cardiovascular do not count as 2 organs if they occur simultaneously (see above under Level 2 care), but will count as Level 3 if another organ is supported at the same time).
Rockwood clinical frailty scale	1 VERY FIT - people who are robust, active, energetic, and motivated. These people commonly exercise regularly. They are among the fittest for their age. 2 WELL - people who have no active disease symptoms but are less than fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally. 3 MANAGING WELL - people whose medical problems are well controlled, but are not regularly active beyond routine walking. 4 VULNERABLE - while not dependent on others for daily help, often symptoms limit activities. A common complaint it being 'slowed up', and/or being tired during the day. 5 MILDLY FRAIL - these people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework. 6 MODERATELY FRAIL - people need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing. 7 SEVERELY FRAIL - completely dependent for personal care from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within 6 months of life). 8 VERY SEVERELY FRAIL - completely dependent, approaching the end of life. Typically they could not recover even from a minor illness. 9 TERMINALLY ILL - approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Pulmonary Embolism Severity Index (PESI)

Predictors	Score	Low risk
Age	Years	(≤ 65 class I, 66-85, class II
Male sex	+10	Mortality 1.9%
Cancer	+30	
Heart failure	+10	Intermediate risk
COPD	+10	(86-105 class III, 106-125 class
HR ≥ 110 bpm	+20	IV)
SBP < mmHg	+30	Mortality 18.4%
RR > 30 breath per minute	+20	High risk
BT < 36C	+20	(>125 class V)
Delirium	+60	
SaO2 <90%	+20	

Two-level PE Wells Score

Criterion	Score	Clinical Probability simplified scores
Clinical signs or symptoms of DVT	3	
Alternative diagnosis less likely than PE	3	PE likely - > 4 PE unlikely - ≤ 4
Heart rate > 100 beats per minute	1.5	
Immobilization (>3 days) or surgery in last 4 weeks	1.5	
Previous history of DVT or PE	1.5	
Hemoptysis	1	
Active cancer within the last 6 months	1	

CODES FOR GRADE

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

A. Case summary - all patients

1a. What type of PE presentation was this?

☐ A patient who presented to hospital with symptoms of PE

☐ A patient who developed PE during the current hospital stay

1b. If the patient presented to hospital with symptoms of PE how were they managed?

☐ As an inpatient ☐ On an Ambulatory care pathway (see definitions) ☐ Other (please describe)

1c. Please use the box below to provide a brief summary of this case, adding any additional comments or information you feel relevant.

Please give as much information as possible about the care of this patient.

B. Patient details - all patients

2. Age at presentation to hospital: ☐☐☐ years **3.** Gender ☐ Male ☐ Female ☐ Transgender

4a. Weight at presentation to hospital ☐☐☐ kg ☐ Not recorded **4b.** Height: ☐☐☐ cm ☐ Not recorded

4c. BMI at time of presentation to hospital ☐☐.☐ ☐ Not recorded

5. Please indicate the patient's documented known co-morbidities/risk factors for VTE at the time of presentation/admission to hospital

- ☐ Personal history of VTE (please provide details in Q8)
- ☐ Factor V Leiden
- ☐ Antiphospholipid syndrome
- ☐ Heparin induced thrombocytopaenia
- ☐ Other hypercoagulable states (please specify below)
  ☐
- ☐ Active cancer (treatment ongoing, within 6 months, or palliative)
- ☐ Trauma or fracture
- ☐ Orthopaedic limb immobilisation
- ☐ Travel/immobility for longer than 4 hours
- ☐ Recent hospitalisation (within 6 weeks of this presentation)
- ☐ Major surgery within 12 weeks of this presentation
- ☐ Pregnancy/puerperium (6 weeks post-partum)
- ☐ Paresis or paralysis
- ☐ Family history of VTE
- ☐ Nursing/care home resident
- ☐ Obesity (BMI > 30)
- ☐ Oestrogen therapy
- ☐ Central line or pacemaker placement
- ☐ Other (please specify)
- ☐ Chronic liver disease/ Cirrhosis
- ☐ Diabetes mellitus
- ☐ Chronic kidney disease
- ☐ Heart failure
- ☐ Chronic lung disease
- ☐ Auto-immune disorder(s)
- ☐ Chronic inflammatory disease(s)
- ☐ Bedridden for 3 days or more in the last 4 weeks
- ☐ IV drug abuse

☐

6a. Was the patient's mental health considered on presentation? ☐ Yes ☐ No ☐ Unknown

6b. Did the patient have a known or newly diagnosed mental health condition? ☐ Yes known ☐ Yes newly diagnosed ☐ No ☐ Unknown

6c. If Yes what condition? ☐

7. Rockwood clinical frailty scale score at presentation (see definitions on page 2) - please estimate from your review of the casenotes:

☐ 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

8a. Had the patient had a previous diagnosis of VTE? ☐ Yes ☐ No (go to Q9) ☐ Unknown

8b. If Yes was this a: ☐ DVT ☐ PE ☐ Other (please specify) ☐

8c. If Yes to 8a how long prior to the current episode did the last diagnosis for VTE occur? ☐ < 3 months ☐ 3-6 months ☐ 6-12 months ☐ > 12 months ☐ Unknown

8d. On how many previous occasions to this episode had the patient been diagnosed with VTE? ☐☐ ☐ Unknown

8e. Was the last episode of PE ☐ Provoked ☐ Unprovoked ☐ Not recorded

9a. Was the patient on prophylactic or therapeutic anticoagulation when they developed the current episode of PE? ☐ Prophylactic ☐ Therapeutic ☐ Neither ☐ Unknown

9b. If Yes, in your opinion was the drug and dosing correct? ☐ Yes ☐ No ☐ Unknown

9c. If No to 9b, please expand on your answer ☐

9d. If the patient wasn't on prophylactic or therapeutic anticoagulation, in your opinion should they have been? ☐ Yes prophylactic ☐ Yes therapeutic ☐ No ☐ Unknown

9e. Is there evidence that the patient was non compliant with medication? ☐ Yes ☐ No ☐ Unknown ☐ Not applicable

10a. For this presentation when did the patient first notice symptoms of PE?

☐☐ ☐☐ ☐☐☐☐ ☐ Date unknown ☐☐ ☐☐ 24 hr clock ☐ Time unknown

d d m m y y y y h h m m

☐ Not applicable - patient developed PE as an inpatient **(please go to section C)**

10b. If the date is unknown please approximate the duration of the patient's symptoms ☐☐ weeks ☐ days ☐☐ hours

11a. Prior to this hospital attendance, did the patient contact/ engage with healthcare services relating to this episode of PE. ☐ Yes ☐ No

☐ Not applicable patient developed PE as an inpatient **(please go to section C)**

11b. If Yes which services (please mark all that apply)?

☐ GP
☐ 111 / NHS 24 services
☐ Urgent Care Centre
☐ Community nurse
☐ DVT clinic/ service at this hospital
☐ Other out-of-hours services
☐ DVT clinic/ service at another hospital
☐ Emergency department of another hospital
☐ Emergency department at this hospital
☐ Other (please specify) ☐

12a. In your opinion, was there an avoidable delay in presentation to hospital? ☐ Yes ☐ No ☐ Unknown

12b. If yes, how long was the delay? ☐☐ weeks ☐ days ☐☐ hours

12c. What was the reason for the delay? ☐ Patient factors ☐ Health care provider factors ☐ Other (please specify) ☐

C. Presentation to hospital - all patients

13a. Time/date of arrival to hospital: ☐☐ ☐☐ 24 hr clock ☐ Time not recorded ☐☐ ☐☐ ☐☐☐☐
h h m m d d m m y y y y

13b. Was this episode/admission ☐ Non-elective ☐ **Elective (please go to section Diii)**

13c. If Non-elective, did the patient arrive by ambulance ? ☐ Yes ☐ No

13d. Mode of presentation (please select all that apply)?

☐ Self referral ☐ Referred by radiology ☐ Directly seen in ambulatory care unit / area / service
☐ GP referral ☐ Referred from outpatient clinic ☐ Other (please specify): ☐

14a. Where was the patient first assessed?

☐ Emergency department (ED) - Resuscitation ☐ ED Majors ☐ ED other area/area unknown
☐ Acute medical unit ☐ Ambulatory care centre / unit (see definitions) ☐ Ambulatory care pathway but on the ward
☐ Other (please specify) ☐

14b. Was the patient treated on an ambulatory care pathway? (for the entire or some part of this episode of PE) ☐ Yes ☐ No ☐ No ambulatory care pathway available

14c. If No, In your opinion should they have been? ☐ Yes ☐ No

14d. If Yes to 14c please expand on your answer? ☐

Di). Ambulatory care patients (including patients who were later admitted)

15a. What time/date was the patient first assessed by a clinician for this episode of care, prior to being placed on the Ambulatory pathway (this could be the patients GP, triage nurse etc)?

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

15b. When was the patient referred to ambulatory care?

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

15c. When was the patient accepted by ambulatory care?

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

15d. Grade and specialty of the person who made the decision to accept this patient for ambulatory care:

Grade: (see definitions) ☐☐ Specialty: ☐ ☐ Not documented

15e. Time/date patient arrived in ambulatory care area/unit

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

16a. Were any formal criteria for ambulatory referral documented? ☐ Yes ☐ No ☐ Unknown

16b. If Yes, what criteria were used to select this patient for ambulatory care?

☐ AMB score (see defintions) ☐ NEWS score ☐ Temperature ☐ Oxygen saturation
☐ Blood pressure ☐ Pulse/heart rate ☐ Respiratory rate ☐ Other ☐
☐ Clinical, please specify ☐

17a. Was an early warning score (eg. NEWS) documented when the patient arrived in the ambulatory area/unit? ☐ Yes ☐ No ☐ Unknown

17b. If Yes, what was the score and when was it recorded?

Type of early warning score ☐ Score ☐☐

17c. Time and date early warning score recorded?

Time ☐☐ (h h) ☐☐ (m m) 24 hr clock ☐ Time unknown Date ☐☐ (d d) ☐☐ (m m) ☐☐☐☐ (y y y y)

18a. When was the first clinical assessment performed in the ambulatory care area/unit?

Time ☐☐ (h h) ☐☐ (m m) 24 hr clock ☐ Time unknown Date ☐☐ (d d) ☐☐ (m m) ☐☐☐☐ (y y y y)

18b. Grade and specialty of the person performing this assessment (see definitions) Grade: ☐☐ Specialty: ☐ Not documented

18c. Was PE suspected/identifed during clerking? ☐ N/A already identified in ED ☐ Yes ☐ No

Dii). Patients presenting to hospital with symptoms of PE that were managed as an inpatient. This includes patients that were initially managed on an ambulatory care pathway

19a. What was the time/date that the patient was formally admitted to hospital?

Time ☐☐ (h h) ☐☐ (m m) 24 hr clock ☐ Time unknown Date ☐☐ (d d) ☐☐ (m m) ☐☐☐☐ (y y y y)

19c. Where was the patient first admitted?

☐ Clinical Decision / Observation unit ☐ Acute assessment unit (eg AMU) ☐ Medical ward

☐ Surgical ward ☐ Level 2 (HDU) ☐ Level 3 (ICU)

☐ Other (please specify) ☐

20a. Time/date of initial clerking:

Time ☐☐ (h h) ☐☐ (m m) 24 hr clock ☐ Time unknown Date ☐☐ (d d) ☐☐ (m m) ☐☐☐☐ (y y y y)

20b. Grade and specialty of doctor performing initial clerking (see definitions) Grade: ☐☐ Specialty: ☐ Not documented

20c. Was PE suspected/identifed for the first time during clerking? ☐ Yes ☐ No

20d. If No, please select all that apply?

☐ Suspected by GP/ ED/ other ☐ Diagnostic tests sent by GP/ED/other ☐ Confirmed by GP/ED/other

☐ Confirmatory test was CTPA/VQ/other ☐ Other (please specify) ☐

Diii). Patients that developed PE as an inpatient

21a. If the patient developed symptoms of PE as an inpatient, what was the original reason for their admission?

21b. Is there evidence in the notes that the patient was assessed for VTE risk at admission ☐ Yes ☐ No

21c. If Yes to 21b, what decision was made?

☐ No thromboprophylaxis required ☐ Anti-embolic stockings ☐ Intermittent Pneumatic Compression ☐ Aspirin

☐ LMWH ☐ Apixaban ☐ Dabigatran etexilate ☐ Fondaparinux sodium

☐ Rivaroxaban ☐ IVC filter permanent ☐ IVC filter inserted for this admission (temporary) ☐ Other

21d. Was this plan implemented? ☐ Yes ☐ No ☐ Unknown

21e. If No to 21d, what method of thromboprophylaxis was provided?

☐ None ☐ Anti-embolic stockings ☐ Intermittent Pneumatic Compression ☐ Aspirin

☐ LMWH ☐ Apixaban ☐ Dabigatran etexilate ☐ Fondaparinux sodium

☐ Rivaroxaban ☐ IVC filter permanent ☐ IVC filter inserted for this admission (temporary) ☐ Other

21f. Was there an avoidable delay in starting thromboprophylaxis? ☐ Yes ☐ No ☐ Not applicable

21g. If Yes please expand on your answer?

22a. When was PE first suspected ☐☐ ☐☐ 24 hr clock ☐ Time unknown ☐☐ ☐☐ ☐☐☐☐

h h m m d d m m y y y y

22b. In your opinion was there a delay in recognising the patient had symptoms of PE? ☐ Yes ☐ No ☐ Unknown

22c. If Yes please give a reason for your answer?

22d. How long was the delay? ☐☐☐ hours

22e. In your opinion was the delay avoidable? ☐ Yes ☐ No

22f. In your opinion did the delay have an adverse impact on outcome? ☐ Yes ☐ No

23a. What type of ward was the patient on when PE symptoms were suspected? ☐ Medical ☐ Surgical ☐ Critical care ☐ Other (please specify)

23b. What type of ward was the patient transferred to after PE was diagnosed? ☐ Medical ☐ Surgical ☐ Critical care ☐ Not transferred ☐ Other (please specify)

23c. If the patient was transferred, who made the decision?

☐ Ward team ☐ VTE team ☐ Haematologist ☐ Respiratory physician

☐ Other (please specify)

23d. Which team managed the patient when PE was suspected?

☐ Medical ☐ Surgical (orthopaedics) ☐ Surgical (non orthopaedics) ☐ Obs & gynae ☐ Oncology

☐ VTE ☐ Critical care ☐ Critical care outreach ☐ Other (please specify) ☐

E. Assessment, investigations and treatments - all patients

24a. What were the first set of observations recorded when PE was suspected?

Respiratory rate ☐☐ ☐ Not documented Heart rate ☐☐☐ ☐ Not documented

GCS or AVPU ☐☐ ☐ Not documented SpO2 ☐☐☐ ☐ Not documented

BP ☐☐☐ / ☐☐☐ ☐ Not documented Temperature ☐☐.☐ ☐ Not documented

24b. What were the clinical symptoms when PE was suspected (please mark all that apply)?

☐ Chest pain ☐ Shortness of breath ☐ Haemoptysis ☐ Syncope / fainting ☐ Cough

☐ Panic attack / anxiety ☐ Leg pain and/or swelling ☐ Arm pain and/or swelling ☐ Other (please specify) ☐

24c. Is there evidence that the hospital's alert system for new PE was used? ☐ Yes ☐ No ☐ Not applicable ☐ Unknown

25a. Was a clinical probability score for PE calculated? ☐ Yes ☐ No ☐ Unknown

25b. If Yes, which score was used?

☐ Modified Wells Score ☐ Simplified Revised Geneva Score ☐ Two level PE Wells Score

☐ Revised Geneva Score ☐ Pulmonary Embolism Rule Out Criteria ☐ Other (please specify) ☐

25c. If Yes to 25a, what score was documented in the notes? ☐☐.☐

26a. In your opinion was there a delay in recognising the patient had symptoms of PE? ☐ Yes ☐ No ☐ Unknown

26b. If Yes what were the reasons for delay? ☐

26c. If Yes to 26a how long was the delay? ☐☐☐ hours

27a. Which of the following 'initial' investigations were carried out when PE was suspected?

☐ dDimer ☐ Clotting screen ☐ Troponin ☐ Blood gases ☐ ECG

☐ CXR ☐ U+Es ☐ FBC ☐ Point of care US / Echocardiogram ☐ BNP/ NT-proBNP

☐ Other (please specify) ☐

27b. In your opinion were any initial investigations that should have been undertaken omitted? ☐ Yes ☐ No ☐ Unknown

27c. If Yes, which?

☐ dDimer ☐ Clotting screen ☐ Troponin ☐ Blood gases ☐ ECG

☐ CXR ☐ U+Es ☐ FBC ☐ Point of care US / Echocardiogram ☐ BNP/ NT-proBNP

☐ Other (please specify) ☐

28a. Which of the following investigations were undertaken (these may have occurred prior to the patients attendance/admission or after their discharge)?

Investigation (please tick all that apply)	Date and time requested	Date and time agreed	Date and time done	Date and time reported
☐ CTPA	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock
☐ VQ/SPECT	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock
☐ Ultrasound of the lower and/or upper limb veins ☐ lower ☐ upper	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock
☐ Other (please specify) ☐	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock
☐ Other (please specify) ☐	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock	d d m m y y h h m m 24 hr clock

28b. In your opinion were any investigations that should have been undertaken omitted? ☐ Yes ☐ No ☐ Unknown

28c. If Yes, which? ☐ CTPA ☐ VQ/SPECT ☐ Ultrasound of the lower limb veins ☐ Formal Transthoracic Echocardiogram ☐ MRI/MRV ☐ Transoesophageal echocardiogram ☐ Focused Echocardiogram ☐ Other ☐

29a. In your opinion were there any delays to carrying out any investigations once PE was suspected? ☐ Yes ☐ No ☐ Unknown

29b. If Yes how long was the delay? ☐☐ days ☐☐ hours

29c. If Yes please expand: ☐

30. If the patient had a CTPA did the formal / final report describe:

a) the site of thrombus ☐ Central ☐ Lobar ☐ Segmental ☐ Subsegmental ☐ Not specified ☐ Other (please specify) ☐

b) the size of thrombus ☐ Large ☐ Moderate ☐ Small ☐ Not quantified ☐ Other (please specify) ☐

c) evidence of right heart strain ☐ Yes ☐ No ☐ No comment made

d) Other findings ☐ Malignancy or metastic disease ☐ Pulmonary infarction ☐ Infection ☐ Chronic lung disease ☐ Other (please specify) ☐

31a. Were any patient risk factors for bleeding documented before commencing treatment? ☐ Yes ☐ No

31b. If Yes what was documented? ☐

32. Which of the following acute treatments did the patient receive and when was the first dose given?

☐ LMWH	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y
☐ Fondaparinux	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y
☐ IV unfractionated heparin (UFH)	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y
☐ Warfarin	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y
☐ Oral anti-coagulant (please specify) ☐	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y
☐ Supplemental oxygen ☐☐☐ highest %	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y
☐ Inotropes	☐☐ h h	☐☐ m m 24 hr clock	☐ Time unknown	☐☐ d d	☐☐ m m ☐☐☐☐ y y y y

33a. In your opinion, were the correct treatments prescribed to this patient? ☐ Yes ☐ No ☐ Unknown

33b. In your opinion were there any avoidable delays to commmencing any of the treatments? ☐ Yes ☐ No ☐ Unknown

33c. If Yes how long was the delay? ☐

33d. Was the patient involved in the treatment decision? ☐ Yes ☐ No ☐ Unknown

34a. If imaging to diagnose PE was scheduled for a later date/time (eg. the next working day), what plan was made for the interim period (please select all that apply)

☐ Start anticoagulant therapy (details provided on previous page)
☐ If on ambulatory care pathway,patient admitted to hospital
☐ Patient was discharged with plan to re-attend at time of confirmatory scan
☐ Information leaflet given
☐ Safety-net advice given
☐ NA - scanned same day
☐ Other (please specify) ☐

34b. If an ambulatory care patient was discharged with a plan to re-attend at the time of a confirmatory scan, who made this decision?

Grade of most senior Doctor (see defintions) ☐☐

☐ If not a Doctor (please specify) ☐

34c. How was the decision to admit or discharge the patient made?

☐ Clinical assessment ☐ Pulmonary Embolism Severity Index (PESI) score ☐☐☐ ☐ simplified PESI score ☐☐☐
☐ Hestia criteria ☐ NEWS score ☐☐☐
☐ Other (please specify) ☐ ☐ Unknown/Not documented

35. Observations at the time PE was confirmed

Respiratory rate ☐☐ ☐ Not documented
Heart rate ☐☐☐ ☐ Not documented
GCS or AVPU ☐☐ ☐ Not documented
SpO2 ☐☐☐ ☐ Not documented
BP ☐☐☐ / ☐☐☐ ☐ Not documented
Temperature ☐☐.☐ ☐ Not documented

36a. Was there an assessment of severity of PE? ☐ Yes ☐ No ☐ Unknown

36b. If Yes what ? ☐ PESI score ☐ Simplified PESI score ☐ APACHE-II
☐ euroSCORE II ☐ Glasgow Coma Scale ☐ Other (please specify) ☐

36c. If Yes what was the severity score ☐☐☐

36d. If Yes when was the score calculated ☐ before confirmation of diagnosis and/or ☐ after confirmation of diagnosis

37a. Were other methods of assessing severity of PE used? ☐ Yes ☐ No ☐ Unknown

37b. If Yes what? ☐

F. Escalation

Please answer the following questions if this patient was admitted to hospital, even if they were initially on an ambulatory care pathway. If the patient was not admitted please go to section G

38a. Was a treatment escalation decision made? ☐ Yes ☐ No ☐ Unknown

38b. If Yes, what was the date and time of this decision?

☐☐ ☐☐ ☐☐☐☐ ☐ Date unknown ☐☐ ☐☐ 24 hr clock ☐ Time unknown

d d m m y y y y h h m m

38c. Please indicate what escalation decisions were made:

☐ For CPR	☐ Not for CPR
☐ For invasive ventilation	☐ Not for invasive ventilation
☐ For critical care referral	☐ Not for critical care referral
☐ For Renal Replacement Therapy	☐ Not for Renal Replacement Therapy
☐ For vasopressor support	☐ Not for vasopressor support
☐ For systemic thrombolysis	☐ Not for systemic thrombolysis
☐ For catheter directed thrombolysis	☐ Not for catheter directed thrombolysis
☐ For surgical thrombectomy	☐ Not for surgical thrombectomy
☐ For IVC filter	☐ Not for IVC filter

39a. Was escalation of treatment discussed with the patient? ☐ Yes ☐ No ☐ Unknown

39b. If not discussed, was the reason for this documented? ☐ Yes ☐ No

39c. If not discussed, was this due to the patient's medical condition? ☐ Yes ☐ No

39d. Was treatment escalation discussed with the patient's family or next of kin? ☐ Yes ☐ No ☐ Unknown

40a. Was the patient referred for: ☐ Level 2/3 admission ☐ Specialist procedure

☐ Escalation of care to another hospital ☐ Other ☐ None of the above

40b. If Referred, in your opinion was this timely? ☐ Yes ☐ No ☐ Unknown

40c. If the patient wasn't referred for any of the above, in your opinion, should they have been? ☐ Yes ☐ No

40d. If Yes, please expand on your answer

41a. Was the patient admitted to: ☐ Level 3 ☐ Level 2 ☐ Mixed Level 2/3 ☐ Transferred to another hospital ☐ Not admitted

41b. If Yes, please provide the date and time of this level 2/3 admission: (if the patient had more than one admission to level 2/3 please put the date of the first admission)

☐☐ ☐☐ ☐☐☐☐ ☐ Date unknown ☐☐ ☐☐ 24 hr clock ☐ Time unknown

d d m m y y y y h h m m

42a. In your opinion was the transfer to level 2/3 care timely? ☐ Yes ☐ No ☐ NA not admitted

42b. If No what caused the delay? ☐ Bed availability ☐ Delayed recognition

☐ Other (please specify)

42c. If the patient was not admitted to level 2/3, in your opinion, should the patient have been? ☐ Yes ☐ No

42d. If Yes, please expand on your answer:

If the patient was not admitted to level 2/3 care please go to section G

43. Which interventions/monitoring did the patient receive in the level 2/3 ward? (If the patient had more than one admission to a level 2/3 ward please answer the question for the first admission)

☐ Respiratory ☐ Cardiovascular support

☐ CPAP ☐ NIV ☐ High flow oxygen ☐ Invasive ventilation ☐ IABP ☐ ECMO ☐ Vasopressors ☐ Inotropes ☐ Mechanical support

☐ Renal Replacement Therapy ☐ Cardiac output monitoring ☐ Other

☐ haemodialysis ☐ haemofiltration

44a. What was the outcome of the level 2/3 stay / interhospital transfer? ☐ Discharged to ward ☐ Discharged from hospital ☐ Died

44b. For patients discharged to a ward, what was the date/time of discharge?

☐☐ ☐☐ ☐☐☐☐ ☐ Date unknown ☐☐ ☐☐ 24 hr clock ☐ Time unknown

d d m m y y y y h h m m

44c. Was the patient readmitted to a level 2/3 ward? ☐ Yes ☐ No

44d. If Yes why was the patient readmitted to a level 2/3 ward?

G. Further treatment and intervention - all patients

45a. Was the anticoagulation plan changed after the first dose was administered? ☐ Yes ☐ No ☐ Unknown

45b. If Yes what was prescribed?

☐ LMWH ☐ Fondaparinux ☐ Oral anti-coagulant (please specify below)

☐ IV unfractionated heparin (UFH) ☐ Warfarin

45c. What was the reason for the change in treatment? ☐ Planned switch to oral therapy ☐ Adverse effects (please specify)

☐ Clinical deterioration ☐ Other (please specify)

46a. Were additional interventions undertaken? ☐ Yes ☐ No

46b. If No, in your opinion should they have been? ☐ Yes ☐ No

46c. If Yes to 46b why do you think further intervention should have been undertaken ?

☐ Shock/hypotension ☐ Hypoxia ☐ Right heart strain ☐ Prevent further PE

☐ Residual DVT ☐ High risk for anticoagulation ☐ Contraindication for anticoagulation ☐ Other (please specify)

46d. If Yes to 46b what intervention(s) should have been undertaken ?

☐ Systemic (intravenous) thrombolysis ☐ Catheter directed local thrombolysis ☐ Catheter directed mechanical clot clearance ☐ Surgical thrombectomy

☐ IVC filter ☐ Other (please specify)

46e. Why do you think the intervention was not undertaken?

☐ Not available at this hospital ☐ Not available out of hours ☐ Procedure wasn't considered

☐ Other (please specify)

47a. Which of the following interventions were undertaken?

☐ Systemic (intravenous) thrombolysis - go to Q47b ☐ Catheter directed local thrombolysis - go to Q47b ☐ Catheter directed mechanical clot clearance - go to Q47b

☐ Surgical thrombectomy - go to Q47b ☐ IVC Filter Insertion - go to Q51a ☐ **No further interventions - please go to section H**

☐ Other intervention (please specify) - go to Q47b

47b. Was the reason for this intervention documented? ☐ Yes ☐ No

47c. If Yes what was the reason (answers may be multiple)?

☐ Shock/hypotension ☐ Hypoxia ☐ Right heart strain ☐ Other (please specify)

48. Was an appropriate consent form with details of risk and benefits completed and signed? ☐ Yes ☐ No

49. Was an inter-hospital transfer required to deliver this treatment? ☐ Yes ☐ No

50a. Did the treatment improve their condition? ☐ Yes ☐ No

50b. Did the patient suffer any complications? ☐ Yes ☐ No

50c. If Yes what?

50d. In Your opinion were any of the complications avoidable? ☐ Yes ☐ No ☐ Not applicable

50e. In Your opinion were the complications managed appropriately? ☐ Yes ☐ No ☐ Not applicable

IVC filter insertion - please complete questions 51 - 59 if the patient had an IVC filter inserted

51a. Was the reason for IVC filter insertion documented? ☐ Yes ☐ No

51b. If Yes what was the reason (answers may be multiple)?

☐ Prevent further PE ☐ Residual DVT ☐ High risk for anticoagulation ☐ Contraindication for anticoagulation

☐ Recurrent PE whilst anticoagulated ☐ Requires surgery ☐ Poor anticoagulation compliance

☐ Other (please specify)

51c. If the patient received a pre-operative IVC filter, what surgery did they have?

51d. When was full therapeutic anticoagulation started after surgery? ☐☐ days post surgery

52. Was an appropriate consent form with details of risks and benefits for IVC filter insertion completed and signed? ☐ Yes ☐ No

53. Was an inter-hospital transfer required to deliver this treatment? ☐ Yes ☐ No

54a. When was the filter inserted? ☐☐ ☐☐ ☐☐☐☐ (d d m m y y y y)

54b. Did the patient suffer any complications of filter insertion? ☐ Yes ☐ No

56b. If Yes what? ☐

56a. Was the IVC filter planned to be ☐ Permanent or ☐ Temporary

56b. If permanent what was reason for this? ☐

56c. If permanent was follow up booked? ☐ Yes ☐ No

57a. If the filter was planned to be temporary, was a retrieval date booked at the time of insertion? ☐ Yes ☐ No

57b. If Yes what date was retrieval booked for? ☐☐ ☐☐ ☐☐☐☐ (d d m m y y y y)

57c. Was the filter retrieved? ☐ Yes ☐ No

57d. If Yes when was the filter retrieved? ☐☐ ☐☐ ☐☐☐☐ (d d m m y y y y)

58a. Did the patient suffer any complications? ☐ Yes ☐ No

58b. If Yes what? ☐

59. If the filter was not retrieved what was the reason for this?

☐ Clot in filter ☐ Retrieval attempted but failed ☐ Clinical deterioration

☐ Decision changed to permanent filter ☐ Other ☐

H. Discharge and follow up - all patients

60a. What was the date of discharge or death? ☐☐ ☐☐ ☐☐☐☐ (d d m m y y y y)

60b. What was the discharge location?

☐ Discharged to usual place of residence ☐ **Not applicable, patient died during this admission (please go to section I)**

☐ Discharged to another hospital ☐ Other ☐

61a. What anti-coagulant medication and dose of medication was this patient discharged on?

☐ LMWH ☐ ☐ Warfarin ☐ ☐ DOAC ☐

☐ Other (please specify) ☐ ☐ None ☐ Unknown

61b. What was the duration of anti-coagulant prescription – (in days) ☐☐☐

61c. In your opinion was this adequate? ☐ Yes ☐ No

62. Did the patient receive written information about PE at discharge? ☐ Yes ☐ No ☐ Unknown

63a. Was follow up arranged for the patient? ☐ Yes ☐ No

63b. If Yes when was the first follow up arranged for? ☐☐ ☐☐ ☐☐☐☐
d d m m y y y y

63c. Which specialties were involved in follow up?

☐ Haematology ☐ Respiratory ☐ Critical care ☐ Acute medicine ☐ Cardiology
☐ Anticoagulation clinic ☐ Vascular surgery ☐ Other (please specify) ☐

64a. Was risk of thrombophilia assessed during this follow up? ☐ Yes ☐ No

64b. If No why was risk of thrombophilia not assessed ? ☐

65a. Was a further appointment arranged for this patient at 3 months? ☐ Yes ☐ No

65b. If Yes which specialties were involved?

☐ Haematology ☐ Respiratory ☐ Critical care ☐ Acute medicine
☐ Anticoagulation clinic ☐ Cardiology ☐ Vascular surgery ☐ Other (please specify) ☐

66. Was a decision made about the duration of anticoagulation? ☐ Yes ☐ No ☐ Unknown

67a. Was the patient readmitted to hospital within 6 months of discharge? ☐ Yes ☐ No ☐ Unknown

67b. If Yes was this a complication of PE? ☐ Yes ☐ No ☐ Unknown

67c. If Yes please provide details (date readmitted, duration and compliation)?

☐☐ ☐☐ ☐☐☐☐ duration (days) ☐☐ complication ☐
d d m m y y y y

☐☐ ☐☐ ☐☐☐☐ duration (days) ☐☐ complication ☐
d d m m y y y y

I. Death - please complete this section if the patient died during this hospital attendance

68a. Speciality of consultant responsible at time of death ☐

68b. Was death anticipated? ☐ Yes ☐ No ☐ Not documented

69a. Was treatment withdrawn? ☐ Yes ☐ No ☐ Not documented

69b. If Yes, was treatment withdrawal discussed with (please select all that apply):

☐ Patient ☐ Relatives ☐ Consultant physician

69c. If not discussed, please provide reasons:

☐

70. Was the patient referred to / discussed with the palliative care team? ☐ Yes ☐ No ☐ Not documented

71. Was CPR attempted? ☐ Yes ☐ No

72. What level ward was the patient on when they died (see page 2 for definitions)?

☐ Level 0 ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Not documented

73. What was the cause of death recorded as?

1a) ☐

1b) ☐

1c) ☐

2) ☐

74a. Was this case reported to the coroner/procurator fiscal? ☐ Yes ☐ No ☐ Unknown

74b. Was a hospital or coronial/fiscal autopsy performed? ☐ Yes ☐ No ☐ Unknown

J. Audit and review - please complete this section for all patients

75a. Was the patient discussed at a M & M meeting? ☐ Yes ☐ No ☐ Not applicable

75b. If Yes, were remediable factors in the care of this patient identified? ☐ Yes ☐ No

75c. If Yes, what were the remediable factors and what action was taken?

☐

76a. If the patient was not discussed at an M & M meeting, having now reviewed the case, in your opinion were there lessons to be learned? ☐ Yes ☐ No ☐ Not documented

76b. If Yes, please describe these:

☐

77. Was the patient included in a hospital related VTE review program? ☐ Yes ☐ No ☐ Not applicable

Thank you for completing this questionnaire

This study was commissioned by The Healthcare Quality Improvement Partnership (HQIP) as part of the Clinical Outcome Review Programme into medical and surgical care.

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