

## Suspected Pulmonary Embolism Care Pathway

### Key Point

- This pathway is for use across all specialties.

**Version:** 2.4  
**Date Issued:** 17 September 2024  
**Review Date:** February 2026  
**Key words:** Pulmonary embolus, suspected pulmonary embolus, PE, thrombolysis

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### Abbreviations

|             |                                                            |
|-------------|------------------------------------------------------------|
| CrCl/eGFR   | Creatinine Clearance/ estimated Glomerular Filtration Rate |
| CTPA        | Computed Tomography pulmonary angiogram                    |
| DVT         | Deep Vein Thrombosis                                       |
| PE          | Pulmonary Embolus                                          |
| sPESI       | Simplified PESI score                                      |
| TnT         | Troponin test                                              |
| PERC        | Validated tools for stratifying patients with likely PE    |
| sPESI       |                                                            |
| Wells Score |                                                            |

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## Executive Summary

This pathway is appropriate for all patients over 18 years of age who have a suspected Pulmonary Embolism (PE). The pathway is designed to improve the flow and process from initial assessment with a suspicion of Pulmonary Embolism until diagnosis and discharge.

Using this pathway **all low risk patients** with suspected Pulmonary Embolism will be under the care and management of the AECU team until discharge as per ESC guidance published in 2014<sup>1</sup>.

**All High risk patients** will be managed on a HDU/ITU setting with early ITU discussion and involvement if not on an HDU.

The pathway includes a flowchart for staff to follow with associated actions and a flowchart for management of the patient once referred to AECU.

## Aim of Pathway

The aim of this pathway is to unify the process of assessment, management and referrals of patients with suspected or proven Pulmonary Embolism across both sites in the trust. This will include collaboration with radiology teams as well as anticoagulation teams to ensure the patient gets a more streamlined pathway of care and resources are used more efficiently.

**N.B. If patient pregnant please see specific pregnancy guidelines - link on page 10**

## Do you suspect a Pulmonary Embolism?

(Breathlessness, pleuritic chest pain, syncope, cough)

**If the patient is in extremis follow instructions of PE thrombolysis box.  
If not continue with pathway below**

### Calculate 2 level WELLS SCORE

|                                           |     |
|-------------------------------------------|-----|
| Previous PE or DVT                        | 1.5 |
| Heart Rate >100                           | 1.5 |
| Surgery or Immobilisation in last 4 weeks | 1.5 |
| Haemoptysis                               | 1   |
| Active Cancer                             | 1   |
| Clinical Signs of DVT                     | 3   |
| PE most likely diagnosis (?CXR performed) | 3   |

### Calculate PERC score

Age  $\geq 50$  years  
Tachycardia >100  
Hypoxic <95% on air  
Previous history of DVT or PE  
Recent Trauma or Surgery  
Haemoptysis  
Exogenous Oestrogen  
Unilateral leg swelling

**If NONE of these apply then a  
PE can be ruled out with a 98%  
negative predictive value**

**Wells Score >4: PE LIKELY**

**Wells score 4 or under:  
PE UNLIKELY**

### D-DIMER Positive

*If patient over 50,  
age adjusted cut-off is  
10 x age*

**Any of the PERC are  
positive: perform a  
D-dimer**

### Calculate sPESI score (see next page) & arrange

1. CXR
2. ECG
3. FBC, U&E, LFTs, Clotting, CRP
4. Troponin

**D-DIMER Negative  
Consider an  
alternative diagnosis**

**sPESI score 0**

**sPESI SCORE 1 or above**

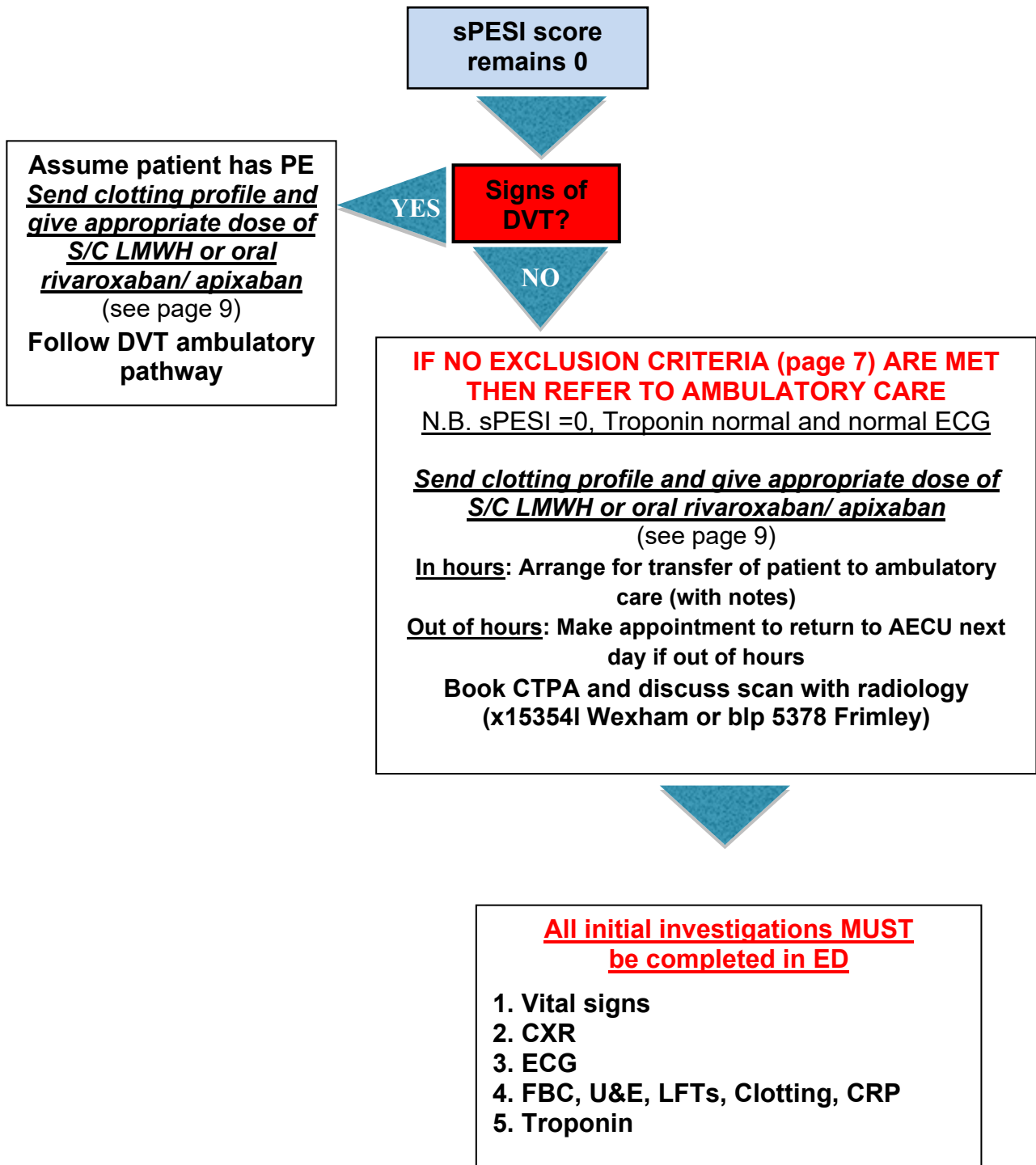
**Consider ambulatory  
care, go next page**

**Refer for Inpatient  
investigation of PE**

**Does the patient have  
signs of HIGH risk PE?**

**Shock or hypotension  
(systolic BP <90mmHg  
or systolic BP fall  
>40mmHg for >15  
minutes not caused by  
sepsis or arrhythmia)  
FOLLOW HIGH RISK  
strategy (Page 8)**

## Do you suspect a Pulmonary Embolism?



## Suitability criteria for Ambulatory management of possible **LOW RISK PE**

### Simplified PESI score:

1. Age >80 years
2. Cancer (history of or active)
3. Chronic lung or heart disease
4. Heart Rate >110 bpm
5. Systolic BP <100 mmHg SpO2 <90%

If **ANY** of these are positive, the 30 day mortality increases from 1.1% to 8.9% and therefore **admission is advised**

### ARE ANY EXCLUSION CRITERIA PRESENT FOR AMBULATORY MANAGEMENT?

| sPESI score of 1 or more                   | Y | N | Right ventricular strain on 12 lead ECG +/- Trop raised (See <b>HIGH risk</b> page 8)    | Y | N |
|--------------------------------------------|---|---|------------------------------------------------------------------------------------------|---|---|
| <b>SATS&lt;94%</b> (unless known COPD/ILD) | Y | N | Significant comorbidity e.g. CKD4, Cirrhosis, decompensated CCF or metastatic malignancy | Y | N |
| Age <18                                    | Y | N | Not registered to a GP/Live out of area                                                  | Y | N |
| Bleeding disorder                          | Y | N | Language difficulties                                                                    | Y | N |
| Active bleeding in last 4/52               | Y | N | Social circumstances or unaccompanied at home                                            | Y | N |
| Creatinine ≥200umol /L                     | Y | N | Anticipated compliance problem                                                           | Y | N |
| Platelets ≤100                             | Y | N | Unable to walk                                                                           | Y | N |
| Heparin allergy or HIT                     | Y | N | Altered mental state (acute or chronic)                                                  |   |   |

### IF ANY EXCLUSION CRITERIA PRESENT

**Patient NOT suitable for  
Ambulatory management**

**Give appropriate dose of S/C  
LMWH**

(see page 8)

**Book CTPA and discuss scan with  
radiology  
(x153541 Wexham or blp 5378  
Frimley)**

**Refer to Acute Medical team  
INPATIENT management on AMU/**

### IF NO EXCLUSION CRITERIA ARE MET THEN REFER TO AMBULATORY CARE

**N.B. sPESI =0, Troponin normal and normal ECG**

**Send clotting profile and give appropriate dose of  
S/C LMWH or oral rivaroxaban/apixaban**  
(see page 9)

**In hours:** Arrange for transfer of patient to ambulatory  
care (with notes)

**Out of hours:** Make appointment to return to AECU next  
day if out of hours

**Book CTPA and discuss scan with radiology  
(x153541 Wexham or blp 5378 Frimley)**

## AMBULATORY PATHWAY FOLLOWING CTPA AND REVIEW OF THE REPORT

### PE DIAGNOSED

Review CTPA findings  
and Troponin and ECG as  
Simplified PESI Score

### LOW risk

(Normal Troponin + No RV  
dysfunction on ECG or  
CTPA & sPESI score  
remains 0)  
Remains suitable for  
ambulatory care

Referral to Anticoagulation team:  
Wexham: x153964 or x153313  
& Complete ICE referral  
Frimley: Blp 5127 & email  
fhft.anticoagulant.clinic@nhs.net

Are anticoagulation team able to  
see the patient the same day?

**YES**

Anticoagulation team to review,  
manage patient medication and  
counselling as per department  
processes  
N.B. Choice of anticoagulation will  
be made on an individual basis  
following discussion with the  
patient

### HIGH risk

Raised Troponin +/- RV  
dysfunction on ECG or CTPA

**ADMIT TO HDU/MADU  
URGENT ECHO  
INFORM AND D/W ICU  
At Frimley discuss with Resp  
Cons (8am to 6pm) on ext  
133722**

Consider further  
investigations  
for unprovoked PE  
(see Appendix 3)

### NO PE SEEN

STOP LMWH or if  
given apixaban/  
rivaroxaban

Consider alternative  
diagnosis and ensure  
senior review has  
taken place prior to  
discharge

Discharge from  
AECU with plan for  
any follow up.  
Complete discharge  
letter

### Out of hours/Weekends

Wexham: leave message on x153964 or  
x153313 & Complete ICE referral

Frimley: Email  
fhft.anticoagulant.clinic@nhs.net

Complete Drug chart as though an  
inpatient for Dalteparin or DOAC (see  
page 8 for dosing)

N.B. Patient/relative to be taught self-  
administration if prescribing Dalteparin  
and given sharps bin  
If not able to self-administer to return to  
Frimley MAU or Wexham AECU

## ENSURE APPROPRIATE FOLLOW UP HAS BEEN MADE FOR THE PATIENT –

### Please use the PE care bundle

FRIMLEY – Complete the online EDMS referral for follow up  
WEXHAM – Anti-coagulation clinic will refer in to Dr K VDA OP Clinic

## Treatment Algorithm for Suspected +/- Proven PE in patients NOT requiring thrombolysis

Is the patient at increased risk of bleeding? (SEE APPENDIX 2)

YES

**Discuss with ED/Medical  
consultant and on-call  
Haematology consultant**

NO

**Commence anticoagulation**

### Initial anticoagulation

- Ensure baseline blood tests including FBC, renal and liver profiles and coagulation screen have been sent prior to commencing anticoagulation (do not need to wait for results before starting treatment).
- Initial treatment can be with dalteparin, rivaroxaban or apixaban.
- We recommend the following dose adjustments according to weight and creatinine clearance (Using Cockcroft-Gault; see [online calculator](#)) using actual body weight:

| Weight     | Dose if CrCl>20ml/min   | Dose if CrCl 10-20ml/min |
|------------|-------------------------|--------------------------|
| < 46 kg    | 7500 units once daily   | 5000 units once daily    |
| 46-56 kg   | 10000 units once daily  | 6500* units once daily   |
| 57-68 kg   | 12500 units once daily  | 8500* units once daily   |
| 69-82 kg   | 15000 units once daily  | 10000 units once daily   |
| 83-98 kg   | 18000 units once daily  | 12500 units once daily   |
| 99-112 kg  | 10000 units twice daily | 15000 units once daily   |
| 113-137 kg | 12500 units twice daily | 18000 units once daily   |
| 138-165 kg | 15000 units twice daily | 10000 units twice daily  |
| >166 kg    | 18000 units twice daily | 12500 units twice daily  |

\* Graduated syringes 10000 units in 1ml to be used for administration of these doses

- For patients with CrCl <10ml/min, consider unfractionated heparin use AND discuss with haematology.
- DOACs are to be used with caution in patients with a creatinine clearance of <30ml/min; please refer to the individual drug SPCs.
- DOACs may not be suitable in those weighing <50 kg or >120 kg. However, there is emerging safety evidence in those >120kg. A DOAC can be considered up to a weight of 140kg or BMI <47 in some patients. For those above 140kg, please discuss with haematology.

### Ongoing anticoagulation

- **Warfarin** - commence once diagnosis is confirmed. Overlap dalteparin and warfarin - continue dalteparin until INR is  $\geq 2$  for 2 consecutive days or for a minimum of 5 days, whichever is longer.
- **Rivaroxaban**- 15mg BD for 3 weeks, then dose is reduced to 20mg OD
- **Apixaban**- 10mg BD for one week and then dose is reduced to 5mg BD.
- For further discussion on the choice of anticoagulants, see [Suspected DVT Care Pathway](#).

## **Emergency PE Thrombolysis**

All patients for consideration of thrombolysis should be discussed with an ICU or respiratory consultant to aid with decision making.

### **In Cardiac Arrest** **(Strong likelihood of PE)** **Alteplase 50mg**

- Alteplase 50mg I.V. bolus given stat (reconstitute one vial into 50mls Water for Injection)
- Follow normal ALS guidelines for resuscitation

Current Resuscitation Council 2015 guidelines suggest considering CPR for 60 – 90 minutes before stopping resuscitation attempt (at clinician's discretion).

Use of the LUCAS™ device is highly recommended in prolonged arrest. Located in Cardiac Cath & ED at FPH and Cardiac Cath Lab, ED and ICU at Wexham.

### **Massive PE (Peri-Arrest)** **Alteplase (weight dependent)**

- High risk of PE with early mortality risk (Shock in absence of arrhythmia)
- Total dose 100mg for patients weighing 65kg and over. For patients less than 65kg the total dose is 1.5mg/kg

1. **2x 50mg vials required. Reconstitute each vial with 25ml Water for Injection.**
2. **Administer 10% of the total dose by slow IV injection over 1-2 minutes.**
3. **Give the remainder of the dose via syringe driver over 2 hours.**
4. **Following this a heparin infusion is required immediately. No loading dose of heparin is required and the infusion should continue for at least 24 hours.**

- If there is no syringe driver available, the reconstituted vial may be further diluted with 0.9% sodium chloride (maximum bag size of 500mls) and administered via a volumetric pump.
- Should be administered through a separate giving set and cannula.

## **Pulmonary Embolism in Special Circumstances**

### **Cancer**

For those patients who develop pulmonary embolism who have known cancer, LMWH or DOACs should be used where possible. Warfarin leads to an increased bleeding risk and does not adequately prevent thrombosis. DOACs are increasingly being used in this setting, but should be avoided in patients with cancers at risk of bleeding including luminal gastrointestinal cancers and genitourinary tract cancers.

### **Weight over 120kg**

There is increasing evidence on the safety of DOACs in patients whose weight is over 120kg, which is the limit for which these medications are currently licenced. They can be considered in patients above this weight limit, up to 140kg or a BMI of <40. Patients above this should be discussed with haematology with regards to risks and benefits of DOAC vs Warfarin.

### **Pregnancy**

See specific guidance in [Thromboprophylaxis and the Treatment of VTE in Pregnancy and the Puerperium](#).

## APPENDIX 1: CONTRAINDICATIONS AND INTERACTIONS OF ALTEPLASE

Please note that in immediately life-threatening pulmonary embolism, absolute contraindications may become relative. All patients for consideration of thrombolysis should be discussed with an ITU consultant to aid with decision making.

### **ABSOLUTE contraindications to use of alteplase:**

- Recent Major trauma, surgery, head injury in preceding three weeks
- Recent (less than 3 months) intracranial or intraspinal surgery or trauma
- Intracranial neoplasm
- Arteriovenous malformation or aneurysm
- Any known history of haemorrhagic stroke or stroke of unknown origin
- Known history of ischaemic stroke or TIA in preceding 6 months
- GI bleeding within the last month
- Known bleeding risk (see Appendix 2)

### **Relative contraindications to alteplase:**

- TIA in the preceding 6 months
- Oral anticoagulation
- Pregnancy (or within 1 week postpartum)
- Non compressible puncture site
- Traumatic resuscitation
- Refractory Hypertension (systolic greater than 180 mmHg)
- Advanced Liver disease
- Infective endocarditis
- Active peptic ulcer

### **Interactions of alteplase**

If patients are already taking an anticoagulant/medication known to increase bleeding (including antiplatelet agents) then they should be discussed with a consultant haematologist.

It should also be noted the concomitant use with ACE inhibitors will enhance the risk of an anaphylactoid reaction.

## APPENDIX 2: PATIENTS AT INCREASED BLEEDING RISK

Factors that lead to increased bleeding risk with the use of any anticoagulant include (taken from NICE guidance);

- Active Bleeding
- Acquired bleeding disorder (such as liver failure)
- Concurrent use of anticoagulants known to increase the risk of bleeding
- Acute Stroke
- Thrombocytopenia (Platelets  $< 75 \times 10^9$ )
- Uncontrolled Hypertension (230/120 mmHg or higher)
- Untreated inherited blood disorders
- Lumbar puncture/epidural/spinal surgery within the next 12 hours
- Lumbar puncture/epidural/spinal surgery within the last 4 hours

If a patient has any of the above risks **and** has a proven PE, a senior clinician must discuss risk: benefit with the patient and document the risks carefully.

### APPENDIX 3: INVESTIGATIONS IN PATIENTS WITH CONFIRMED PE

Please use the PE care bundle to ensure that you have considered all of the issues advised in PE follow up care.

There is a well-recognised association between cancer and venous thromboembolism, and all patients over 45 with new PE should have basic investigation to help exclude this:

- Clinical history suggestive of malignancy
- Full clinical examination
- Blood tests including FBC, LFTs, U&Es, Bone profile
- CXR
- Consideration of CT and mammography **if indicated** (e.g., symptoms, signs or suspicion – please note this is a change in NICE guidance)

In this Trust, all patients referred to the anti-coagulation department with a new PE will be assessed by a senior physician to consider further investigations.

- At Wexham this is in the VTE Review Clinic as a matter of course.
- At Frimley please complete the on line referral form and the patient will either be seen in clinic or an advice letter will be written to the patient and GP.

Please do not routinely order additional imaging unless there is obvious clinical indication; the need will be considered in the Review clinic. This clinic will also address the question of duration of anticoagulation therapy and thrombophilia screening in selected cases – do not send acutely.

## APPENDIX 4: MISCELLANEOUS

### Reversal Protocols

Separate protocols for reversal of warfarin and unfractionated heparin exist on each site. Reversal of LMWH or rivaroxaban or apixaban is more difficult – if this is needed then please discuss with the on call haematology consultant to consider the options.

### Breast feeding and CTPA

There is no evidence of harm being caused to the thyroid of the baby from the contrast used in the scan (fetal thyroid iodination/FTI) but the milk taste will be affected so we recommend expressing 2+ feeds prior to the scan where possible; and, where not, using bottle feeds for 12hrs after the scan. You should then express and dispose of the breast milk for 12 hrs after the scan.

## APPENDIX 5 – PATIENT INFORMATION LEAFLET

**Respiratory Medicine**  
**Frimley Park and Wexham Park Hospitals**



### Pulmonary Embolism

During this assessment in the Emergency Department (ED) or hospital you have been diagnosed with a possible Pulmonary Embolism (PE): this is a blood clot within your lung(s). The doctors have assessed you and have decided it is safe to send you home.

Prior to leaving the hospital you will be given either:

- Dalteparin (Fragmin) which is administered as a subcutaneous injection (into the fatty layer just below the surface of the skin in your tummy), this is to protect you from further embolic (blood clotting) events. You will require these injections once or twice daily depending on your weight.
- or a Direct Oral Anti-Coagulant (DOAC), which is a tablet that thins the blood and protects against further clotting events. The 2 DOACs in widespread use are Apixaban and Rivoroxaban,

You may be given an appointment to attend the Ambulatory Emergency Care Unit (AECU) on the next working day if you were diagnosed in ED (the AECU is open Monday - Friday 10.00am – 6.00pm).

On the AECU one of the senior clinical staff will explain your assessment and treatment plan, organise diagnostic tests for you if required and commence you on treatment with anticoagulation therapy (medication that makes your blood less likely to clot), depending on the results of the tests.

#### What is a Pulmonary Embolism?

A pulmonary embolism (PE) is a blood clot that has lodged inside one of the arteries in the lungs. Depending on the size of this clot, a pulmonary embolism can cause damage to lung tissue and affect the proper functioning of the damaged lung. This can be a serious condition; but doctors use a series of assessments to establish if you need tests in hospital or whether this can be done as an outpatient.

#### Where do clots come from?

Blood clotting is a normal process. For example, if you cut yourself, eventually the blood clots and bleeding from the injured area stops. This process is necessary to ensure that damaged areas are repaired.

Occasionally though, this mechanism malfunctions and blood clots can form inside the blood vessels when the blood flow has merely slowed down or become sluggish. Clots like these generally form in the large deep veins of the leg. This is called a deep vein thrombosis (DVT). Sometimes either all or part of the DVT breaks away and travels via the circulation, passing through the heart and lodging in the lung. This is called a pulmonary

embolism (PE). An embolus is a blood clot that has moved from the location where it was formed. Once it travels through the blood stream, it can obstruct a blood vessel, causing an interruption in the supply of blood.

### What are the symptoms of a Pulmonary Embolism?

The symptoms of pulmonary embolism (PE) depend on a number of factors, including the location of the blockage and the size of the area affected by the lack of blood supply.

Some of the possible signs and symptoms of pulmonary embolism are:

- Feelings of being breathless that comes on suddenly with no apparent explanation.
- Pains in the chest when you breathe in.
- Feeling faint.
- Coughing up blood-stained phlegm.

### How is a PE diagnosed?

A PE can be difficult to diagnose, as many other conditions can give rise to similar symptoms. A diagnosis of PE is made based on your symptoms, clinical examination, blood tests and lung scan.

### How is a PE treated?

A PE is treated with anticoagulant medication. Anticoagulants are drugs that stop clots forming. At first, you may be given heparin injections. Once the diagnosis is confirmed you may be started on warfarin tablets or one of the new agents called Direct Oral Anti-Coagulants (DOACs). As Warfarin takes a few days to start working, the heparin injections are continued; however, once the warfarin has taken effect, the heparin injections can be stopped. This is not required for the DOACs.

### Will this anticoagulation medication break down the clot?

Neither the heparin nor the warfarin have any direct effect on the blood clot itself, your body will break that down over time.

Anticoagulants work to prevent the clot becoming any larger and moving again. They also stop new clots forming at a time when you would be at risk of this.

### How long do I need to stay in hospital?

This depends on how ill you are. Some patients have mild symptoms and feel reasonably well after a PE. If this is the case then you would usually stay a few days; we are hoping to introduce a supported early discharge scheme to further reduce the hospital stay.

Other patients have large clots and can require special drugs to dissolve the clot, or are very breathless and require oxygen treatment for a few days. If this is the case, you will need to stay in hospital until you are well enough to go home.

### Why did I get a PE?

For many patients the reasons for having a PE are unknown. Below are some factors that are known to increase the risk of blood clots forming:

- Previous history of blood clots
- Advancing age
- Immobility
- Recent surgery especially orthopaedic or major abdominal surgery
- Recent immobilization of leg with a plaster of Paris
- Recent long distance travel by air, coach or car
- Recent admission to hospital with an acute illness or infection
- Pregnancy / Contraceptive pill / HRT
- Some genetic predispositions
- There are some underlying medical conditions that can increase the risk of clots forming; these include inflammatory bowel disease and cancers.

Having a PE DOES NOT MEAN THAT YOU HAVE ONE OF THESE CONDITIONS.

The follow up that is arranged after the diagnosis is confirmed is to establish if further tests are needed to investigate the cause of the PE.

However, the large majority of patients sustain a PE for no identifiable reason. This is called a spontaneous or idiopathic PE.

### Useful Websites

- [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)
- [www.emedicinehealth.com](http://www.emedicinehealth.com)
- [www.patient.co.uk](http://www.patient.co.uk)
- [www.thrombosis.co.uk](http://www.thrombosis.co.uk)

**For a translation of this leaflet or for accessing this information in another format:**

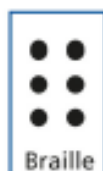
**Large Print**   
Easy to Read



Translation



Audio



Braille

Please contact (PALS) the Patient Advice and Liaison Service on:

**Frimley Park Hospital**

Telephone: 0300 613 6530

Email: fhft.palsfrimleypark@nhs.net

**Wexham Park & Heatherwood Hospitals**

Telephone: 0300 615 3365

Email: fhft.palswexhampark@nhs.net

|                                                                                  |                                                                              |                                                                                |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Frimley Park Hospital</b><br>Portsmouth Road,<br>Frimley,<br>Surrey, GU16 7UJ | <b>Heatherwood Hospital</b><br>Brook Avenue,<br>Ascot,<br>Berkshire, SL5 7GB | <b>Wexham Park Hospital</b><br>Wexham Street,<br>Slough,<br>Berkshire, SL2 4HL |
| <b>Hospital switchboard:</b> 0300 614 5000                                       |                                                                              | <b>Website:</b> <a href="http://www.fhft.nhs.uk">www.fhft.nhs.uk</a>           |

|                         |                                                          |                   |                      |                    |            |
|-------------------------|----------------------------------------------------------|-------------------|----------------------|--------------------|------------|
| <b>Title of Leaflet</b> | Pulmonary Embolism                                       |                   |                      |                    |            |
| <b>Author</b>           | Georia Tunnicliffe<br>Consultant in Thoracic<br>Medicine | <b>Department</b> | Respiratory Medicine |                    |            |
| <b>Ref. No</b>          | W/028/2                                                  | <b>Issue Date</b> | April 2022           | <b>Review Date</b> | April 2024 |

#### Legal Notice

Please remember that this leaflet is intended as general information only. We aim to make the information as up to date and accurate as possible. Please therefore always check specific advice or any concerns you may have with your doctor.

**Full version control record**

|                                                                              |                                                                                                         |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Version:</b>                                                              | 2.4                                                                                                     |
| <b>Guidelines Lead(s):</b>                                                   | Dr G Tunnicliffe, Consultant in Thoracic Medicine and<br>Dr G Barnett, Consultant in Emergency Medicine |
| <b>Contributor(s):</b>                                                       | Dr J Seymour                                                                                            |
| <b>Lead Director / Chief of Service:</b>                                     | Dr Gareth Roberts, CoS for Medicine                                                                     |
| <b>Library check completed:</b>                                              | N/A                                                                                                     |
| <b>Ratified at:</b>                                                          | Thrombosis Committee, 24 February 2022                                                                  |
| <b>Date Issued:</b>                                                          | 17 September 2024                                                                                       |
| <b>Review Date:</b>                                                          | February 2026                                                                                           |
| <b>Pharmaceutical dosing advice and<br/>formulary compliance checked by:</b> | Harminder Sangha, February 2022                                                                         |
| <b>Key words:</b>                                                            | Pulmonary embolus, suspected pulmonary embolus,<br>PE, thrombolysis                                     |

This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt, contact a senior colleague or expert. Caution is advised when using guidelines after the review date.

This guideline is for use in Frimley Health Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

**Version Control Sheet**

| Version | Date      | Guideline Lead(s)                    | Status  | Comment                                                                                                                                                           |
|---------|-----------|--------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | 22/2/2018 | Dr G Tunnicliffe and<br>Dr G Barnett | Final   | Peer-reviewed by Dr J Kitt, Dr P Redman, Dr C Rees, Dr G Roberts<br>Dr N Bienz, Dr S Iyengar, Dr J Jordan, Dr F Garcia and at WPH Respiratory Clinical Governance |
| 2.0     | 24/2/22   | Dr G Tunnicliffe                     | Final   | Approved at CG.                                                                                                                                                   |
| 2.1     | 25/2/2022 | H Sangha                             | Interim | Corrections to<br>WPH phone numbers.                                                                                                                              |
| 2.2     | 27/7/23   | Dr G Tunnicliffe                     | Interim | Amendment to advise use of actual<br>body weight for LMWH dosing                                                                                                  |
| 2.3     | 29/11/23  | Dr G Tunnicliffe                     | Interim | Addition of point 4 to Massive PE<br>pathway (p9) and update link to<br>Obstetrics guideline.                                                                     |
| 2.4     | 17/09/24  | H Sangha                             | Interim | Correction to match BMI to patient<br>weight in dose calculations.                                                                                                |