

Suspected DVT Care Pathway

Key Points

- This document outlines the pathway to be followed when a patient presents with a suspected Deep Vein Thrombosis (DVT).
- Most patients will be managed in an outpatient setting, largely through the ambulatory care unit.
- All patients with a confirmed DVT should be referred to the anticoagulation department and follow-up arranged in the thrombosis clinic where needed.

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Abbreviations

AEC	Ambulatory Emergency Care
DOAC	Direct oral anticoagulant
DVT	Deep vein thrombosis
LMWH	Low molecular weight heparin
ULN	Upper limit of normal

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1. REFERRALS TO THE AMBULATORY EMERGENCY CARE (AEC) UNIT

- 1.1 The majority of suspected DVTs are managed in an Ambulatory Emergency Care setting at both the Frimley Park and Wexham Park Ambulatory Emergency Care Units. The Frimley Park Hospital (FPH) operates from 9am-7pm Mon-Fri and 11am-7pm weekends and bank holidays; and Wexham Park Hospital (WPH) operates 9am-10pm Mon-Fri and 9am-9pm weekends and bank holidays.
- 1.2 Referrals to AEC can be made directly from GPs, or through the emergency department (ED) at both sites (ext 132789 at FPH or 154237 at WPH).
- 1.3 Exclusion criteria for AEC should be used with patients considered inappropriate for assessment in Ambulatory Emergency Care being seen in the ED. Exclusion criteria will differ between the two units but generally patients must be clinically stable, be mobile or able to sit in a wheelchair and not presenting with an acute mental health or intoxicated presentation.

2. INVESTIGATING A SUSPECTED DVT

- 2.1 Patients should be investigated as outlined in the proforma in Appendix 1. In the case of a negative initial ultrasound scan, the need for further imaging will depend on whether a proximal or whole leg scan was performed.
At WPH protocol is for proximal veins to be examined only. If the initial ultrasound scan was negative and the patient had a likely pre-test probability with a positive D-dimer, the patient could still have a distal DVT. They will be asked to re-attend for second ultrasound in one week. They should not receive anticoagulation during this week. If the scan remains negative they will be discharged without treatment. If the initial ultrasound scan examined the whole leg with adequate views, no repeat scan is needed at one week. Currently at FPH whole leg scans are offered so there is reduced need for patients to return for repeat scans.

2.2 Special situations:

- **Patients with recurrent symptoms in the same leg as a previous DVT** should be investigated with an initial ultrasound and a D-dimer. A clinician will use both of these results, together with clinical assessment and ideally with reference to previous ultrasound imaging results, to decide if a new clot has occurred. If the scan is abnormal, but only in sites known to be abnormal on a previous scan (or no previous scan is available) it is often difficult to know whether there is new clot or residual vein thrombosis. Ultrasound findings suggestive of a prior DVT are non-occlusive DVT, disconnected DVT, echoes and signs of flow within the DVT, and DVT at a location that does not fit with the clinical signs. The scan, the clinical situation and the D-dimers should all be considered in forming a management plan. If the patient was on anticoagulation already, with good compliance (and therapeutic INR if on warfarin) and there is a convincing new DVT in spite of this, they should be examined carefully for a provoking factor such as malignancy and consideration of escalating their anticoagulation e.g., to warfarin with a target INR of 3-4.
- **Patients with bilateral symptoms:** Most patients with bilateral leg swelling will not have a DVT but will have a systemic condition such as heart failure, hypoalbuminaemia or renal failure. However bilateral DVT was found in 4.4% (1 in 23) of DVT patients in the RIETE registry. The patient should be investigated for alternative causes by a doctor and ultrasound only performed if DVT remains a likely differential. With unexplained bilateral swelling, consider the possibility of IVC thrombus and the need for CT with contrast.

- **Patients with high clinical suspicion, a grossly swollen leg, but a negative scan.** If a patient has a grossly swollen leg but a negative scan, consider a CT venogram to look for iliac or pelvic vein thrombosis or pelvic pathology causing external compression of pelvic veins.

3. TREATING A CONFIRMED DVT

- 3.1 The prescribing clinician should choose an appropriate anticoagulant agent to start, which can be with direct oral anticoagulant (DOAC) therapy (apixaban or rivaroxaban are recommended here) or low molecular weight heparin (LMWH) and warfarin. If the patient presents out-of-hours and/or there is a delay >4 hours until the time of their ultrasound scan, they should be commenced on anticoagulation therapy pending the scan. If possible, an interim anticoagulant that can be continued if VTE is confirmed should be chosen.
- 3.2 The DOACs are recommended as first line treatment for people with confirmed DVT unless the following situations apply:
 - 3.2.1. Extremes of weight: DOACs may not be suitable in those weighing <50kg or >120kg. However, there is emerging safety evidence in those >120kg for the treatment of VTE. A DOAC can be considered up to a weight of 140kg or BMI of 47 in some patients for this indication. For those above 140kg, please discuss with haematology.
 - 3.2.2 Renal impairment with CrCl<15 ml/min (See further information in sections 3.4 and 3.5)
 - 3.2.3 Certain subtypes of active cancer (see section 3.7 for further discussion).
 - 3.2.4 Antiphospholipid syndrome. LMWH and warfarin should be used in preference to DOAC therapy in those with antiphospholipid syndrome.
- 3.3 All patients commencing anticoagulation treatment should have baseline blood tests performed (FBC, renal and hepatic function, coagulation screen) and should be appropriately counselled on the medication. At WPH, all counselling is performed by the anticoagulation department. At FPH, the counselling may be performed by trained staff on the ambulatory care unit; in such cases the competency assessment document (appendix C) should be completed. The majority will be counselled by the anticoagulation team. The importance of compliance with anticoagulant medication must be stressed to patients, outlining the risks of poor compliance.
- 3.4 **Apixaban**

Apixaban is a direct inhibitor of factor Xa and is licensed for the treatment of DVT and PE and for the secondary prevention of recurrent DVT and PE. It does not require therapeutic monitoring, nor concurrent initial treatment with LMWH. It is not licensed for use in those aged less than 18 years of age.

Dosing - 10 mg twice daily for 7 days, then 5mg twice daily. On the first day the second dose can be taken later that evening even if the first dose is given in the afternoon. The licensed dose for prevention of recurrent DVT and/or PE following completion of 6 months of treatment for DVT or PE is 2.5 mg twice a day. Patients must receive a minimum of three months full dose treatment.

Renal impairment – no dose adjustment is necessary in patients with mild or moderate renal impairment. In patients with severe renal impairment (CrCl 15-29 mL/min) apixaban is to be used with caution. We will not routinely use apixaban if CrCl < 30

mL/minute but in selected patients it can be considered for use if the CrCl is 15-30 ml/min.

Hepatic impairment – avoid in liver disease with coagulopathy or if ALT/AST > 2x ULN, Bilirubin x 1.5 ULN

Pregnancy or breast feeding – avoid.

Missed doses - If a dose is missed the patient should take the missed dose immediately and take the next dose on time (if the next dose is due a double dose can be taken).

Interaction with other medicinal products

The use of factor Xa inhibitors is not recommended in patients receiving concomitant systemic treatment with azole-antimycotics (such as ketoconazole, itraconazole, voriconazole and posaconazole) or HIV protease inhibitors (such as ritonavir). These active substances are strong inhibitors of both CYP3A4 and P-gp and therefore may increase rivaroxaban and apixaban plasma concentrations to a clinically relevant degree. Co-administration of factor Xa inhibitors with strong CYP3A4 inducers, e.g., rifampicin, phenytoin, carbamazepine, phenobarbital or St. John's Wort, may lead to reduced rivaroxaban and apixaban plasma concentrations. We therefore recommend that strong CYP3A4 inducers should not be co-administered with factor Xa inhibitors when treating acute venous thromboembolism. Macrolide antibiotics, such as clarithromycin and erythromycin, may inhibit metabolism of factor Xa inhibitors and therefore caution should be applied if co-prescribed.

Prescription

Initially a one month supply of apixaban treatment should be prescribed and the GP should then continue.

3.5 Rivaroxaban

Rivaroxaban is a direct inhibitor of factor Xa and is licensed for the treatment of DVT and PE and for the secondary prevention of recurrent DVT and PE. It does not require therapeutic monitoring, nor concurrent initial treatment with LMWH. It is not licensed for use in those less than 18 years of age.

Dosing - 15 mg twice daily with food for 21 days, then 20 mg once daily with food. The dose for prevention of recurrent DVT and/or PE following completion of 6 months of treatment for DVT or PE is 10mg once daily or 20mg od in high risk cases. Patients must receive a minimum of 3 months full dose treatment.

Renal impairment – if CrCl 15–49 mL/minute initially 15 mg twice daily for 21 days, thereafter, the recommended dose is the standard 20 mg once daily but a reduction of the dose from 20 mg once daily to 15 mg once daily should be considered if the patient's assessed risk for bleeding outweighs the risk for recurrent DVT and PE. The SPC says use with caution if CrCl 15-29 mL/minute and avoid if CrCl less than 15 mL/minute. We do not recommend using Rivaroxaban if CrCl < 30 mL/minute.

Hepatic impairment – avoid in liver disease with coagulopathy or if liver enzymes >2x ULN

Pregnancy or breast feeding – avoid.

Missed doses - If a dose is missed during the 15 mg twice daily treatment phase (day 1 - 21), the patient should take the missed dose immediately and take the next dose on time (if the next dose is due two 15 mg tablets can be taken together). The patient should then continue with 15 mg twice daily.

If a dose is missed during the once daily treatment phase (day 22 and onwards), the patient should take the missed dose immediately, and continue on the following day with the once daily intake as recommended. The dose should not be doubled within the same day to make up for a missed dose.

Interaction with other medicinal products

As for Apixaban, above. Co-administration of rivaroxaban with dronedarone should be avoided given limited clinical data.

Prescription

Initially a one month supply of rivaroxaban treatment should be prescribed and the GP should then continue.

3.6 Low molecular weight heparin and warfarin

All patients who are to start on warfarin therapy should be referred to the anticoagulation clinic for counselling and dosing. We recommend the following dose adjustments according to weight and creatinine clearance (CrCl) (using Cockcroft-Gault; see [online calculator](#)) using actual body weight.

USE FIXED DOSE SYRINGES and give dalteparin subcutaneously once a day (unless specified):

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 twice daily	10000 units twice daily
≥ 166 kg	18000 twice daily	12500 units twice daily

For patients with CrCl <10ml/min, consider unfractionated heparin use AND discuss with haematology.

*Graduated syringes 10000 units in 1ml available for administration

There is no need to routinely monitor anti-Xa assays in patients who weigh between 40-180kg. Contact haematology for advice regarding monitoring.

Where the patient is to commence on warfarin, dalteparin should be continued until the INR has been ≥ 2 for at least two consecutive days or for five days – whichever is the longer. Monitoring the platelet count for heparin induced thrombocytopenia is not necessary.

The recommended target INR is 2.5 (target range 2.0-3.0)

The usual warfarin loading schedule is 10mg on day 1, 10mg on day 2 and 5mg on day 3. This is a suitable regimen for patients age < 70 who are otherwise well with no concurrent disease, generally these will be outpatient VTE patients. Consider lower loading doses in elderly patients and if on interacting drugs.

The following schedule (Fennerty et al 1984) should be used. Note that this requires daily INR tests.

Day	INR	Warfarin dose (mg)
First	< 1.4	10
Second	< 1.8	10
	1.8	1
	> 1.8	0.5
Third	< 2.0	10
	2.0 –	5
	2.1	
	2.2 –	4.5
	2.3	
	2.4 –	4
	2.5	
	2.6 –	3.5
	2.7	
	2.8 –	3
	2.9	
	3.0 –	2.5
	3.1	
	3.2 –	2
	3.2	
	3.4	1.5
	3.5	1
	3.6 –	0.5
	4.0	
	> 4.0	0
		(Predicted maintenance dose)
Fourth	<1.4	> 8
	1.4	8
	1.5	7.5
	1.6 –	7
	1.7	
	1.8	6.5
	1.9	6
	2.0 –	5.5
	2.1	
	2.2 –	5
	2.3	
	2.4 –	4.5
	2.6	
	2.7 –	4
	3.0	
	3.1 –	3.5
	3.5	
	3.6 –	3
	4.0	

4.1	–	Omit next day's dose then give 2 mg
4.5		
> 4.5		Omit 2 doses then give 1 mg

3.6 Choice of anticoagulant in patients with active cancer

DOACs (apixaban or rivaroxaban) can be considered as first-line treatment of DVT in people with active cancer. We recommend avoiding DOACs in patients with luminal gastrointestinal cancers or patients at risk of bleeding from the genitourinary tract, patients with brain metastases, or patients with bleeding risk factors. DOACs may also be considered for suitable patients initiated on LMWH but who are unable to tolerate injections or wish to avoid further LMWH injections. The LMWH of choice in this Trust is dalteparin:

Dalteparin treatment dose for first month:

Weight	Dose if CrCl > 20ml/min	Dose if CrCl < 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 twice daily	10000 units twice daily
≥ 166 kg	18000 twice daily	12500 units twice daily

*Graduated syringes 10000 units in 1ml available for administration

There is no need to routinely monitor anti-Xa assays in patients who weigh between 40-180kg. Contact haematology for advice regarding monitoring.

After the first month the dose is reduced to the pre-filled syringe in the band below (unless patient <46 kg)

Dalteparin Dose AFTER the first month

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

A minimum of 3-6 months' treatment is recommended. At review, if cancer is not cured, some form of continuing anticoagulation is usually recommended. but the evidence for LMWH is absent beyond 6 months.

3.7 Treating distal (isolated calf) DVTs

Where a whole leg scan is performed, isolated distal DVTs may be detected. We recommend treating such patients with 3 months' anticoagulation. We recognise that this may lead to over-treating some patients, as the majority of these DVTs have a low risk of propagating to form more significant clot. However, due to the risk of clot extension in higher risk patients and to avoid the need for repeat serial scanning, we have opted to recommend anticoagulating all patients with confirmed distal DVTs.

3.9 Duration of anticoagulation

Patients with a proximal DVT should be treated for at least 3 months. For a first proximal DVT associated with clear transient risk factors such as recent surgery, significant trauma (e.g., fracture, plaster cast), the combined oral contraceptive pill or hormone replacement therapy, or pregnancy/puerperium, treatment can stop at 3 months.

Long-term treatment should be *considered* for

- recurrent thrombosis
- patients with an on-going risk factor such as cancer
- a first unprovoked proximal DVT (or PE).

Patients where long-term treatment is considered should be reviewed in the thrombosis clinic to discuss this. Patients who had only a weak transient risk factor for DVT (e.g. a long-haul flight or temporary immobility) should also be reviewed at three months to discuss duration of treatment.

3.10 Referral to the anticoagulation department

All patients (unless already under care of a haematologist) with a confirmed DVT should be referred to the anticoagulation department, even if the patient has already been counselled on DOAC therapy in AEC (FPH only – such cases will not be seen in anticoagulant clinic but documentation must be submitted as per page 6 Blue Box). This is so that appropriate follow-up can be arranged in the thrombosis clinic, where appropriate, and to ensure robust data collection on DVTs, including monitoring numbers of hospital-acquired DVT.

4. INVESTIGATING FOR OCCULT MALIGNANCY IN PATIENTS WITH A CONFIRMED UNPROVOKED DVT

All patients should have a full history, examination and baseline blood tests. Patients with any concerning symptoms or signs should have targeted further investigations to investigate for an underlying cancer or alternative occult disease.

We recommend:

- CXR

And, if not performed in the past year,

- Breast examination in women over 50 years of age
- PSA in men over 40 years of age

- Calcium

There is no role for routine CT scanning and this is no longer recommended by NICE, but it should be considered in individual cases if there is a high index of suspicion of malignancy, including extensive ilio-femoral DVTs. Cancer screening should be performed where indicated at the time of initial diagnosis if clinical suspicion is high by the diagnosing team (in these rare cases, the screening should be performed at diagnosis, as VTE clinic follow-up is usually arranged at about 3 months at both FPH and WPH).

5. THROMBOLYTIC THERAPY

Consider referral to vascular surgeons for consideration of catheter-directed thrombolytic therapy for patients with symptomatic iliofemoral DVT who have all of:

- symptoms of less than 14 days' duration (if any doubt refer for discussion)
- good functional status
- a life expectancy of 1 year or more
- No contraindications to thrombolysis, no significant bleeding risk factors

6. UPPER LIMB DVT

The pre-test probability assessment is not used for upper limb DVT; all suspected cases should be investigated with ultrasound examination. The initial treatment is the same as for a lower limb DVT. Recurrence rates for upper limb DVT after treatment for three to six months are low and it is likely that prolonged anticoagulation is not required for most patients. For most patients with upper limb DVT in association with an indwelling central venous catheter, the catheter should not be removed if it is functional and there is an ongoing need for the catheter (discuss with relevant clinical team). If the catheter is removed anticoagulant treatment should not be shortened to less than 3 months.

Any patients who may benefit from thrombolysis and potential thoracic outlet decompression should be discussed with the vascular team. Typically, thrombolysis is avoided in this setting in patients aged >60 and such patients should continue to be treated under the medical team.

All patients (unless clearly catheter-associated event) need dedicated imaging with chest CT to exclude malignant external compression.

7. MANAGEMENT OF VTE IN PREGNANCY

Please liaise with obstetric team and refer to [Thromboprophylaxis and treatment of VTE in pregnancy and the puerperium](#) guidance.

8. SUPERFICIAL THROMBOPHLEBITIS / SUPERFICIAL VEIN THROMBOSIS (SVT)

The most commonly affected superficial veins are the long (great) and short saphenous veins of the leg. Referral for investigation should not normally be necessary for a short segment of below knee SVT unless concomitant DVT is suspected. Patients who are referred with suspected concomitant DVT are assessed for DVT. If during this investigation it is found that SVT is adjacent to (within 3 cm of) the sapheno-femoral junction (SFJ) we

recommend treating with therapeutic anticoagulation for three months as there is a high risk of progression to DVT.

Patients with mild SVT (e.g., less than 5 cm in length) can typically be treated with NSAIDs, whereas patients with more severe disease (e.g., >5 cm) may be better treated with intermediate dose LMWH for 6 weeks (e.g., Dalteparin ~125 units/kg OD rounded to nearest syringe). Although DOACs are not licensed for this indication a recent study (Beyer-Westendorf, *et al* 2017) suggested prophylactic dose rivaroxaban (10 mg od) was non-inferior to prophylactic dose fondaparinux (2.5 mg od). Use of DOAC for SVT will be at the discretion of the prescribing clinician but if being used in an unlicensed way should be agreed with the patient; this is due to be discussed at Medicines Committee.

In patients with persistent SVT there is no definitive NICE guidance. Patients should be advised that it can take several weeks to settle and treatment with NSAIDs may be of benefit. A referral to the Vascular team would be sensible if deemed truly chronic. Patients with a past history of VTE who develop SVT warrant discussion with haematologist.

9. REFERENCES

Keeling D et al. Oxford Haemophilia and Thrombosis Centre Out-Patient DVT service protocols 2017.

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Young AM et al. Comparison of an Oral Factor Xa Inhibitor With Low Molecular Weight Heparin in Patients With Cancer With Venous Thromboembolism: Results of a Randomized Trial (SELECT-D). *J Clin Oncol.* 2018; 36:2017-2023

Beyer-Westendorf J et al. Prevention of thromboembolic complications in patients with superficial-vein thrombosis given rivaroxaban or fondaparinux: the open-label, randomised, non-inferiority SURPRISE phase 3b trial. *Lancet Haematol* 2017; 4:e105-113.

APPENDIX A: INVESTIGATION PROFORMA FOR SUSPECTED LOWER LIMB DVT

1 Review of History and Results

NO YES

☐ ☐ Preceding trauma?

☐ ☐ Bilateral Symptoms?

☐ ☐ Back pain / sciatica type symptoms?

-If yes to any excluded from pathway

3 Pre-test Probability (PTP)

Adapted from Wells & Anderson (1997)

☐ 1 Active Cancer (treatment for cancer within last 6 months or currently receiving palliative treatment)

☐ 1 Paralysis, paresis or recent plaster immobilisation of lower extremity

☐ 1 Recently bedridden for 3 days or more, or major surgery within 3 months

☐ 1 Localised tenderness along distribution of deep venous system

☐ 1 Entire leg swollen (up to top of thigh)

☐ 1 Calf swelling at least 3cm larger than asymptomatic leg (measured 10cm below tibial tuberosity)

☐ 1 Pitting oedema confined to symptomatic leg

☐ 1 Collateral superficial veins dilated (non-varicose)

☐ 1 Previously documented Deep Vein Thrombosis/PE

☐ -2 Alternative diagnosis at least as likely as deep-vein thrombosis (e.g. Cellulitis)

2 Blood Results:

Hb		Na	
WBC		K+	
Plats		Urea	
MCV		Creat	
ALT		CRP	
ALP		APTR	
Bili		APTT	

PTP Total Score:

☐ Low 0-1 ☐ High 2+

Take Point of Care D-Dimer

Result: _____

(Note adjusted cut off for over 50s to age in years x 10 mcg/L)

<500 or as per Age Adjusted values

>500 or as per Age Adjusted values

Unable to exclude DVT- patient needs assessment in Ambulatory Care

DVT Excluded

☐ Consider alternative diagnosis

☐ Results and reassurance given

☐ Advised GP follow up in 1 week with re-referral to AEC if symptoms persist

☐ Complete ICE Discharge letter

Signed: _____

Call Ambulatory Care (ext 4237 at WPH or 2789 at FPH) to discuss and refer.

Management Plan

☐ Alternative diagnoses excluded but DVT cannot be excluded at present

☐ Commence anticoagulation treatment (see box 4 for options)

☐ Book available slot for assessment in Ambulatory Care DVT Service

☐ Give patient Suspected DVT Service leaflet- advise coming for ASSESSMENT and may not require Ultrasound

☐ Leave notes in Ambulatory Care tray in ED

I confirm the above has been completed Signed: _____

IMPORTANT NOTE

Please ensure patient is told they are attending Ambulatory Care for an assessment not for an Ultrasound

Ambulatory Emergency Care DVT Service Assessment

Date and Time: ____/____/____ :__

Patient Name: _____

Assessed by: _____

Hospital Number: _____

Observations

BP ____/____	Pulse _____
SpO2 _____	Temp _____°C
Resp Rate _____	

Reassessment Checklist

- ☐ Observations stable (NEWS <2)
- ☐ No evidence of Cellulitis, Trauma or Heart Failure
- ☐ PTP > 2 or PTP < 2 with D-Dimer > 500
- NO TO ANY QUESTION INDICATES NEED FOR SENIOR REVIEW**

Limb Circumference:

Affected Limb (circle):
Left Right

L Calf: _____ cm

R Calf: _____ cm

Ultrasound Request

- ☐ Request Ultrasound on ICE
- ☐ Call Radiology Reception (WPH) or book US on Symphony (FPH) to confirm slot
- ☐ Patient attends and advised to return to AEC after scan

Senior Review and Plan

Ultrasound Findings

Date of scan: ____/____/____

- ☐ Positive Scan (skip to next page)
- ☐ Negative full leg or limited scan with **low probability (PTP)***
- ☐ Negative (not full leg) or limited scan with **high probability (PTP)**

DVT Excluded

- ☐ Consider alternative diagnosis
- ☐ Results and reassurance given
- ☐ Advised GP follow up in 1 week with re-referral to AEC if symptoms persist
- ☐ Complete Discharge letter

Signed: _____

Senior clinical review

- ☐ Reassess PTP +/- Repeat D-Dimer as required - PTP: _____ D-Dimer: _____
- ☐ Exclude alternative causes for symptoms

Patient to return in 1 week for Review and Repeat Ultrasound

- ☐ Give patient time and date to come back on interim letter (Book on Symphony at FPH)
- ☐ Complete discharge letter
- ☐ Note: If 1st scan negative, anticoagulation not indicated during this week

Repeat Ultrasound Findings

Date of scan: ____/____/____

- ☐ Positive Scan (skip straight to next page)
- ☐ Negative or inconclusive repeat scan

DVT Excluded

- ☐ Consider alternative diagnosis
- ☐ Results and reassurance given
- ☐ Advised GP follow up
- ☐ Complete ICE Discharge letter

Signed: _____

*Keeling D, Curry N, Shapiro S, Price V and Mulholland L (July 2017) 'Oxford Haemophilia and Thrombosis Centre out-patient DVT Service Protocols' Available from:
www.ouh.nhs.uk/services/referrals/specialist-medicine/documents/dvt-protocols

Confirmed Deep Vein Thrombosis

Confirmed DVT Checklist

- ☐ Diagnosis and need for anticoagulation explained
- ☐ Add calcium and LFTs to bloods if not already done
- ☐ Urinalysis
- ☐ Chest X-Ray
- ☐ Complete Discharge Letter
- ☐ Consider cancer screening at the time of diagnosis if high index of suspicion of malignancy e.g. extensive ilio-femoral DVTs

Additional Risk Factors

Average Alcohol Intake: _____ units/week

Never-Smoked - Current Ex-Smoker pack years _____

Weight: _____ kg Height: _____ cm BMI: _____

Urinalysis

Referral to Anticoagulation team / thrombosis clinic

Wexham Park Hospital

☐ ICE referral to anticoagulation team

☐ Notes in envelope

Before 5pm

Call and refer to team (ext 3313)

Inform patient- notes with patient if going today or notes to anti-coag office next day
ICE discharge letter

After 5 pm

Call and leave voicemail (ext 3964)
Patient will get call from anti-coag

Dose of anticoagulation (see below)
Notes to anti-coag office next working day

Frimley Park Hospital

For all patients: Photocopy proforma and place in anticoag tray

All patients should be counselled on anticoagulation; counselling can be performed by AEC staff if competent (see Appendix B). All patients starting warfarin should be seen by a member of the anticoagulation team.

Anticoagulation

Weight: _____ kg

Anticoagulant: Apixaban ☐ Rivaroxaban ☐ Dalteparin ☐

Administration Date	Administration Time	Administered by

NB: Dalteparin should be used if weight >120 kg or contraindication to DOAC, including pregnancy

Prescriber's Details-

Name: _____ Signature: _____

GMC/NMC Pin Number: _____

Anticoagulation Dosing

Apixaban: Commence 10mg PO BD (Will convert to 5mg PO BD after 7 days if DVT confirmed).

Rivaroxaban: Commence 15mg PO BD (Will convert to 20mg OD after 3 weeks if DVT confirmed).

Dalteparin: Dose according to weight:

Weight (kg)	Dosage by Subcutaneous injection
<46kg	7,500 units once a day
46-56kg	10,000 units once a day
57-68kg	12,500 units once a day
69-82kg	15,000 units once a day
>83kg	18,000 units once a day

Weights >98 kg require doses significantly higher than 18,000 units od. For further details see section 3.6 of suspected DVT pathway

APPENDIX B: PATIENT INFORMATION LEAFLET

https://nhs.sharepoint.com/sites/RDU_SPS/PILs/documents/A_025.pdf

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



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

Frimley Park Hospital Portsmouth Road Frimley Surrey, GU16 7UJ	Heatherwood Hospital London Road Ascot SL5 8AA	Wexham Park Hospital Wexham Slough Berkshire, SL2 4HL
Hospital switchboard: 0300 614 5000		Website: www.fhft.nhs.uk

Title of Leaflet	Suspected DVT pathway				
Author	S Harding, Consultant Nurse, Ambulatory Emergency Care				
Ref. No	A/025/4	Issue Date	March 2021	Review Date	March 2023

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.

Ambulatory Emergency Care



Frimley Health
NHS Foundation Trust

Wexham Park: 0300 615 4600
Level 1, Emergency Assessment Centre
Open 9am – 10pm Monday to Friday and
9am – 9pm Weekends and Bank Holidays

Frimley Park: 0300 6139238
Via Entrance C – near to Main Entrance
Open 8am – 9pm Monday to Friday only

Out of hours: Please contact the Emergency Department

Suspected DVT Pathway



Information for patients, relatives
and carers

What is a Deep Vein Thrombosis (DVT)?

A Deep Vein Thrombosis (DVT) is a clot in one of the deep veins, usually in the leg. DVT usually occurs when blood cells stick together in a deep vein, causing a clot. Anything that keeps your blood from circulating properly can cause a clot, including injury, immobility, illness, certain inherited conditions and lifestyle factors.

If a DVT is suspected and left undiagnosed it can lead to serious complications. This is why you have been referred to Ambulatory Care to have further investigations to ensure your safety.

What is Ambulatory Emergency Care?

The Ambulatory Emergency Care Unit has been designed to provide access to those who need urgent or same day assessments and investigations but do not require to be admitted to hospital. The aim of this service is to ensure patients receive the assessments and treatment they need without the need to be admitted to a ward overnight.

You may be given a time to attend the unit. As this is an Emergency Service, please be aware that any times given are a guide and not a strict appointment time. There may be a short wait to be seen by one of the Doctors or Nurse Practitioners.

What are the benefits of Ambulatory Care?

By using this model we ensure that you only need to stay in hospital if absolutely necessary. This is not only more comfortable for you, but also allows us to keep the Emergency Department free for emergencies and our hospital beds for those patients who need them.

What tests will I undergo?

This will depend on your condition; however, initially patients will often have the following performed on arrival to the unit:

- Blood pressure, pulse and temperature
- Blood samples

You may also have more specific tests such as an X-Ray or scan.

You may have a wait for results to come back or for review by a senior member of staff, if required. It may be possible for you to leave your phone number so you can wait off the unit and we will call you back when required. Please speak to a member of staff to see if this is an option for you.

What happens next?

Deep Vein Thrombosis is generally recognised as a condition which does not need an overnight stay in hospital and the vast majority of patients who attend and are diagnosed with a DVT go home the same day.

If a DVT is confirmed by the Ambulatory Emergency Care team you may need to start on blood thinning medication to keep you safe. This will be explained by the team if needed.

Visitors

Visitors/companions may be permitted at the discretion of the department and in line with current Trust guidance.

Patient Feedback

It is very important we give the best service we can and we encourage all feedback. You will find 'Friends and Family' feedback forms in the unit which we would be grateful if you could complete during or following your stay with us.

APPENDIX C: DOAC COUNSELLING COMPETENCY ASSESSMENT (FPH ONLY)

DVT clinic Anticoagulation Counselling Competency Assessment Document*

Name:

Assessor:.....

Start date:.....

Completed:

Guidelines for completing the Competency Assessment Document (CAD)

- These competencies are assessed in practice, to give structure to your learning.
- Each of the listed skills should be assessed as the level it is currently performed at. These levels are as follows:
Needs development (N) ,competent with support (CS) and independently competent (IC).

*Adapted with permission from King's College Hospital DVT clinic foundation competency assessment document

Competency	Self assessment (Level, date, sign)	Assessor/line manager assessment (Level, date, sign)	Reassessment (Level, date, sign)
Demonstrates in practice:			
1.1 List the four DOACs which are licensed for use in the UK			
1.2 List the mode of action for each DOAC			
1.3 Understand the dose regimen for DOACs			
1.4 Understand how each DOAC is monitored			
1.5 Understand management for a patient who is bleeding on a DOAC			
1.6 Deliver safe DOAC counselling including: - Indication - Likely duration - Starting dose - Dose changes - Interactions - Risk of bleeding - Pregnancy - Missed/overdose - Contraindications			

Full version control record

Version:	3.4
Guidelines Lead(s):	Dr C Rees, Consultant Haematologist Dr N Philpott, Consultant Haematologist
Contributor(s):	Dr B Graf, Consultant Acute Medicine Physician Sean Harding, Consultant Nurse - Acute Care Harminder Sangha, Anticoagulant Specialist Pharmacist Jayne Hughes, Anticoagulation Specialist Nurse Manager
Lead Director / Chief of Service:	Dr G Roberts, Chief of Service, Medicine
Library check completed:	N/A
Ratified at:	Thrombosis Committee March 2021
Date Issued:	17 September 2024
Review Date:	August 2024
Pharmaceutical dosing advice and formulary compliance checked by:	Harminder Sangha, Anticoagulant Specialist Pharmacist March 2021
Key words:	VTE, DVT, PE, DOAC, warfarin, LMWH, apixaban, rivaroxaban, dabigatran, edoxaban

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 History

Version	Date	Guideline Lead(s)	Status	Comment
1.0	25.09.19	Dr N Philpott/Dr B Graf	Final	Ratified at Thrombosis Committee
2.0	23.10.19	Dr N Philpott/Dr B Graf	Final	Minor amendment to proforma dosing table agreed by Thrombosis Committee
3.0	17.02.21	Dr N Philpott/Dr C Rees	Final	
3.1	28.10.21	Guidelines team	Interim	New guidelines template applied
3.2	27.07.23	Dr N Philpott/Dr C Rees	Interim	Amendments RE: dosing of anticoagulants with actual body weight, hepatic impairment, dosing in renal failure. Also updated advice on DOAC use at extremes of weight
3.3	20/11/23	Guidelines team	Interim	Update links to other guidelines.
3.4	17/09/24	H Sangha	Interim	Correction to BMI in s.3.2.1 for patient criteria

Related Documents

Document Type	Document Name
Guideline	Suspected Pulmonary Embolism Care Pathway