This pathway will aid GPs in the assessment of patients who are at such low risk of DVT that they do not need hospital referral, as well as allowing some patients to receive care closer to home through a more streamlined approach to DVT management. It also highlights which patients presenting to Primary care require hospital admission, and which can safely be referred for further investigation via One Call.

Currently if patients presenting to primary care either in-hours or out of hours (OOH) are suspected of having a DVT, their management involves referral to either the anticoagulant nurse specialist or AMU at St Richards or the Clinical Matrons at Worthing.

These guidelines guide the Primary care Practitioner in the initial management of potential VTE. There is a shared responsibility for the patients’ safe movement from Primary to Secondary care and appropriate treatment and investigation as rapidly as possible.

Use of clinical probability assessment linked to D-Dimer testing of low risk patients will identify a group who do not need referral to secondary care for scanning.

For patients with a high clinical probability score for VTE, but for whom a scan is not available that day, it will be possible for appropriately selected patients to be started on low molecular weight heparin (LMWH) either at the surgery or at the OOH base. Arrangements will then be made for their on-going management at hospital as soon as possible and ideally within 48 hours and always within 5 days.

Certain patient groups should be discussed with an appropriate clinician via One Call (0845 092 0414), including patients with the risk profiles given below. These guidelines propose the GPs role in their care is to correctly identify them as needing further discussion before referring them with the DVT referral Proforma.

Discuss or Refer the following Patients with suspected DVT:

- Suspected Pulmonary Embolism
- Patient pregnant/Perinatal (12/52)
- Significant colour change in the whole affected limb
- Involvement of the whole leg (i.e. likely VTE extending above inguinal ligament)
- Evidence of Great Saphenous Vein thrombophlebitis (NB these patients should be discussed with a Vascular Surgeon)
- Patients at increased risk of bleeding, these include:
  - Active peptic ulcer
  - Uncontrolled BP>200/>110
  - Known thrombocytopenia
  - Eye or CNS surgery in past month
  - Stroke within past month
- Patients with relative contra-indications for LMWH as follows:
  - Known liver disease
  - Patients with known poor renal function i.e. Creat >200 or eGFR<30
  - Known allergy to Heparin
  - Patient on Warfarin & INR >2

Once you have ascertained the patient with a suspected DVT does not require further discussion you may use these guidelines to support their further assessment and initial care.
Please consult the DVT Referral Proforma and ‘Primary Care Assessment of DVT’ Pathway. This applies a simple pre-test probability (Wells) score to each patient to determine if they are at high risk or low probability of having a DVT:

<table>
<thead>
<tr>
<th>Assess Clinical Probability: Total score ≤1 = low risk  ≥2 = high risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Active cancer (treatment in last 6 months or palliative)</td>
</tr>
<tr>
<td>• Paralysis, paresis, or recent plaster cast on lower limb</td>
</tr>
<tr>
<td>• Bedridden &gt; 3 days, or major surgery in past 12/52</td>
</tr>
<tr>
<td>• Previously documented DVT</td>
</tr>
<tr>
<td>• Calf swelling &gt;3cm cf. other calf</td>
</tr>
<tr>
<td>(measured 10cm below tibial tuberosity)</td>
</tr>
<tr>
<td>• Collateral superficial veins (non-varicose)</td>
</tr>
<tr>
<td>• Pitting edema (confined to symptomatic leg</td>
</tr>
<tr>
<td>• Swelling of calf and thigh</td>
</tr>
<tr>
<td>• Localized pain along distribution of deep venous system</td>
</tr>
<tr>
<td>• Alternative diagnosis at least as likely</td>
</tr>
</tbody>
</table>

Assess the patient as low or high probability for DVT. In low probability patients, a D-Dimer test needs to be performed to guide further management. Remember that an alternative diagnosis that is concurrent (e.g. Cellulitis/trauma) and at least as likely to cause the patients’ symptoms subtracts 2 points from the score.

**D-DIMER TESTING**

Any high probability patient requires a scan, and D-Dimer testing will not alter that advice and so is not required (D-Dimer not 100% sensitive for DVT). High probability patients will need LMWH and referral to hospital.

- D-Dimer testing in Primary care is useful in the assessment of a patient at low probability of a DVT
- Low probability patients with a positive D-Dimer will require a scan,
- Low probability patients with a negative D-Dimer exclude DVT and an alternative diagnosis should be sought.
- A positive D-dimer result is of no value and may occur in normal patients.
- Only a negative D-dimer with a low probability score is useful.

**ASSESSMENT AND MANAGEMENT OF HIGH PROBABILITY PATIENTS (WELLS SCORE >=2)**

D-Dimer testing is not required for this group, as they will require a scan irrespective of the D-Dimer result. Low probability patients with a Positive D-Dimer result will also follow this pathway.

Most of these patients will require admission, although may be managed via the outpatient pathway after discussion and appropriate advice and agreement with the SpR or Consultant.
REFERRAL TO HOSPITAL
Please note that the DVT service is an OUTPATIENT SERVICE, so patients who have severe mobility issues will require appropriate transport planning which can be arranged via One Call. Patients suffering from dementia or other communication issues should have an escort with them.

- Complete the DVT Referral Proforma, available to download from the guidelines website http://www.coastalwestsussexccg.nhs.uk/deep-vein-thrombosis
- Contact One Call team on 0845 092 0414
- Fax completed referral proforma to WORTHING: 01903 285092 or Email: SC-TR.OneCallSouthreferralsonly@nhs.net
- Next available Ultrasound scan will be booked (always within 5/7) and patient informed.
- Administer first dose of LMWH and ensure subsequent doses available as agreed with the SpR or Consultant.
- GP to arrange for FBC and U&Es within 24 hrs of referral (this is to check Haemaglobin and renal function before giving a prolonged course of LMWH, however, the initial dose of LMWH can be given without the blood results). If the patient’s USS scan is booked for the following day, blood tests may not be necessary.
- Prescribe adequate analgesia as DVT can be very painful (not NSAID).
- Give the patient the copy of the DVT assessment pro forma (and any other accompanying information you feel would be helpful) to take with them to AMU.

ASSESSMENT AND MANAGEMENT OF LOW PROBABILITY PATIENTS (WELLS SCORE <=1)

Low probability patients will not have significant signs of a DVT and they will have a low pre-test probability score (≤1). In this group a D-Dimer test is a useful adjunct to the clinical assessment. If negative the sensitivity of the test is high, ruling out 95-98% of DVTs. A low probability patient with a negative D-Dimer does not need referral to hospital services as this effectively rules out a DVT. The Primary care Practitioner should consider alternative diagnoses.

A positive D-Dimer result in a low probability score patient does not prove that the patient has a DVT but indicates that they will need referral for further DVT assessment. D-Dimer may be positive in cellulitis and other infections underlying malignancy following trauma superficial thrombophlebitis post-operatively in normal pregnancy normal elderly patients.

A positive D-Dimer result in a low probability score patient requires referral to secondary care via One Call in exactly the same way as for the high-risk patient who needs referral for a scan. These patients also need to be assessed for likelihood of bleeding and to be started on LMWH.

LOW MOLECULAR WEIGHT HEPARIN (LMWH) :

If administering LMWH follow the dosing guidelines (see below).
Using subcutaneous Dalteparin sodium as a single daily dose:

Adult: Body-weight under 46 kg, 7500 units daily
       Body-weight 46–56 kg, 10 000 units daily
       Body-weight 57–68 kg, 12 500 units daily
       Body-weight 69–82 kg, 15 000 units daily
       Body-weight 83 kg and over, 18 000 units daily

Ultrasound request Referral Form: http://www.coastalwestsussexccg.nhs.uk/deep-vein-thrombosis
SECONDARY CARE PATHWAY & RESPONSIBILITIES

In patients with a Positive scan, WSHT will formalise a treatment plan, counsel and advise on anticoagulation and refer to the Anti-coagulation clinic at the next possible appointment. In addition to this, WSHT will also request appropriate investigations on those patients in whom a clear precipitant is not evident according to NICE guidelines. These results will be the responsibility of the ordering clinician. The results will be communicated appropriately to the patients’ GP.

Stockings: It is recommended by NICE that patients who have a DVT wear grade 3 stockings for 2 years (NICE Clinical Knowledge Summaries, March 2009). Assessment for suitability for below knee stockings will be made in secondary care, and where appropriate, stockings will be issued by the orthotics department at the relevant hospital.

Scan results and any decisions on further management or investigation of the patient will be communicated to the GP in an appropriate and timely manner.

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