UNM HOSPITALS

Initial VTE Treatment Protocol for the ED

This is an evidence-based protocol. It is not intended to replace clinical judgment.

Direct oral anticoagulants (DOACs), such as rivaroxaban and apixaban, should be considered in preference to conventional therapy with enoxaparin+warfarin if the patient is an appropriate candidate.

Patients must have the following to be a DOAC candidate:

- Adequate renal function (CrCl >30 mL/min)
- No significant drug interactions
- Confirmed financial coverage for medication
- History of good medication compliance

I. Acute-phase anticoagulant dosing◊

Rapid Acting Anticoagulant	Dose	Comment	Overlap Therapy
Rivaroxaban*° (Xarelto®)	15 mg PO BID x 21 days THEN 20 mg PO DAILY	• **Requires approval from inpatient anticoagulation service (505-264-6970)** • Requires admission or holding in Obs if inpatient anticoagulation service not available • If patient initially on empiric enoxaparin, stop enoxaparin and switch to DOAC at time next enoxaparin would have been due • If patient empirically on IV UFH, stop IV UFH and start DOAC immediately	• **No overlap therapy needed** • Patient should only be discharged with Rx for 15 mg PO BID x 21 days • Second Rx for 20 mg tabs to be given to the patient at follow-up appointment at UNMH outpatient anticoagulation clinic (if they live in the ABQ metro area) or their PCP (if they live outside of ABQ metro area) • Alternatively, the inpatient anticoagulation service may recommend use of a Xarelto® (rivaroxaban) starter pack (if appropriate) which would provide initial 30-day supply
Apixaban*° (Eliquis®)	10 mg PO BID x 7 days THEN 5 mg PO BID	• **Requires approval from inpatient anticoagulation service (505-264-6970)** • Requires admission or holding in Obs if inpatient anticoagulation service not available • If patient initially on empiric enoxaparin, stop enoxaparin and switch to DOAC at time next enoxaparin would have been due • If patient empirically on IV UFH, stop IV UFH and start DOAC immediately	• **No overlap therapy needed** • Patient should only be discharged with Rx for 10 mg PO BID x 7 days • Second Rx for 5 mg tabs to be given to the patient at follow-up appointment at UNMH outpatient anticoagulation clinic (if they live in the ABQ metro area) or their PCP (if they live outside of ABQ metro area) • No starter packs available for Eliquis® (apixaban)
Enoxaparin (should be overlapped with warfarin for a minimum of 5 days and INR >2 for ≥ 24 hours)	1.5 mg/kg SQ ONCE DAILY (preferred) OR 1 mg/kg SQ BID If estimated CrCl <30 ml/min, call pharmacy for dose adjustment.	• Preferred over high-intensity heparin infusion • If once daily dose >150 mg, BID dosing must be used • If enoxaparin prescribed, please provide a prescription for a 7-day supply for bridging purposes	Warfarin* **30 day supply** (start on day 1 if possible) 2.5 mg PO QHS if any of the following: • Liver disease • ≥ 75 years old • Albumin ≤ 2.5 • Decompensated heart failure • Malignancy • Drug interactions that may increase INR 5-7.5 mg PO QHS if none of the above
High intensity heparin protocol (should be overlapped with warfarin for a minimum of 5 days and INR >2 for ≥ 24 hours)	See protocol	Use only if: • Severe renal impairment • Invasive procedure anticipated (e.g. thrombolysis)	

***Avoid in pregnancy** **°Not an option for self-pay patients. Use conventional therapy with enoxaparin and warfarin**

◊ For more detailed information on individual anticoagulants, including contraindications, interactions, etc, please refer to clinical guidelines on the Pharmacy webpage https://hospitals.health.unm.edu/intranet/pharmacy/drug_info.shtml

II. Outpatient vs. inpatient management of DVT/PE (see algorithm A below)

A. **For DVT**: Recommend initial outpatient treatment when eligibility criteria in **section C** below are met.

B. **For PE**: Early discharge *(but not ED discharge)* is suggested over standard discharge (5 full days of inpatient bridging overlap). (Grade 2B)

1. Patients with PE should be admitted for at least 24 hours to ensure adequate levels of anticoagulation, completion of any needed consults and arrangement of medication procurement and follow-up.
2. Earlier discharge and home treatment may be considered when simplified PESI score is 0 AND eligibility criteria in **section C** below are completed or met

SIMPLIFIED PE SEVERITY INDEX (PESI)

VARIABLE	POINT
Age > 80 years	1
History of cancer	1
Chronic cardiopulmonary disease	1
Pulse ≥ 110 beats/min	1
Systolic blood pressure <100mmHg	1
Arterial oxyhemoglobin saturation level <90%	1
Score of ≥1 = high risk of 30-day mortality Score of 0 = low risk of 30-day mortality	

C. Eligibility criteria for outpatient treatment of VTE:

1. Age ≥ 18 years
2. Adequate renal function (CrCl >30 ml/min)
3. No other indication for hospitalization
4. No baseline coagulopathy (INR >1.5, aPTT > 40 sec, PLT < 50K)
5. Does not meet criteria for thrombolysis
6. No massive DVT (severe pain, swelling of entire limb, limb ischemia, acrocyanosis)
7. Not pregnant
8. No recent or active bleed (w/in last 3 months)
9. No recent surgery (w/in last 4 weeks)
10. No history of HIT
11. Able to get home oxygen if hypoxic
12. Confirmed ability to obtain medications on an outpatient basis
13. Stable home environment
14. Safe place to store medication(s)
15. Able & willing to self-inject or has help at home (for patients discharged on enoxaparin)
16. Patient has good social support and is expected to be compliant with follow-up

III. Obtaining medications (see algorithm B below)

A. Whenever possible, UNM Hospitals Discharge Pharmacy and Care Transitions Services should be utilized
- **1.** Hours of operation and contact information listed in table below
- **2.** Medications should be delivered to the bedside whenever possible
- **3.** If patients are deemed reliable and can be provided with adequate wayfinding instructions or assistance, they may be discharged from the ED and pick up their anticoagulants from the UNMH Discharge Pharmacy on 4ACC

B. If outside of the UNM Hospitals Discharge Pharmacy and Care Transitions Service hours but *within 12 hours of services opening:*
- **1.** Patients should be placed in observation until these services are available
  - **a)** Patients should receive first doses of medication(s) while in observation

C. If it will be >12 hours before these services are available (e.g. Sat PM, as pharmacy is closed on Sunday)
- **1. UNINSURED patients**
  - **a) These patients are only eligible for conventional therapy with enoxaparin and warfarin.**
  - b) These patients will need to be admitted to ensure medications can be obtained
  - c) Case management should be consulted to begin process of getting patient enrolled in a prescription benefit program via a financial appointment
  - d) Waivers for enoxaparin are available on a case-by-case basis from the Discharge Pharmacy and Care Transitions Services

- **2. INSURED patients**
  - a) Patients may be directed to the Walgreens at Carlisle/Lomas to fill their medications.
    - i. Hours of operation and contact information listed in table below
  - b) If possible, call the pharmacy to confirm coverage of electronically sent prescription(s) to prevent delay in medication retrieval
  - c) If after Walgreen's hours, patient should be directed to a 24-hour retail pharmacy in the metro area that is confirmed to have medication(s) in stock and that will accept their insurance
    - **i. If this cannot be ensured, it is likely best to hold the patient in Observation until the next morning when inpatient anticoagulation services are available and can aid in identifying a solution**

IV. Care transitions (See algorithm B below)

1. Anticoagulation education
   - a) All patients being discharged on anticoagulants should have appropriate education on each anticoagulant prior to leaving the hospital
     - i. At minimum, patients should be provided with written educational materials
     - ii. Whenever possible, verbal and video education should be used to optimize education
     - iii. Education should be documented via the "Education- Anticoagulation" ad hoc form in Powerchart
2. Handoff to next provider/care setting
   - a) All patients being discharged on anticoagulants should be referred to an outpatient provider or specialty clinic for follow up prior to leaving the hospital.
     - i. Whenever possible, a follow-up appointment for anticoagulation management should be scheduled for the patient before they leave the hospital.
   - b) Patients should be provided with a safety net phone number (505-264-6970) to call if they have questions or run into barriers of care after leaving the hospital

V. Resource contact information

Resource	Contact information	Hours	Comment
ED Pharmacist	505-710-1533	0700-0130	7 days/week
Case management for ED ED Social work ED Daytime RN Case Manager PM Nurse Case manager	 505-951-9980 505-951-3320 505-951-2871	 0800-2300 0800-1800 1230-2300	7 days/week
Inpatient Anticoagulation Service	505-264-6970	0800-1630	7 days/week
Inpatient Antithrombosis Pharmacist	505-306-8987	0800-1630	M-F
UNMH Coumadin clinic	505-272-6202	0800-1600	M-F, closed holidays
Walgreens Pharmacy (Lomas and Carlisle)	505-255-8908	0800-2200 Monday-Friday 0900-1800 Saturday 1000-1800 Sunday	This Walgreens guarantees to stock all strengths of enoxaparin, rivaroxaban and apixaban
UNMH Pharmacy Discharge RX Service Leadership: Trinh Pham, PharmD Ali Ahmed, PharmD Frieda Ortega, PharmD	Fax Rx to: 505-925-0638 Delivery tech: 505-350-2918 Direct pharmacists line: 505-272-1591 Transitions of care: 505-688-1920	Rx processing: M-F: 0800-2000 Sat: 0800-1800 SUNDAY CLOSED Suggested deadline for Rx submission: M-F: 1900 Sat: 1700 Prescriptions received after suggested deadline may not be processed until next day	Allow at least 2 hours for Rx processing

Use this link to access the discharge pharmacy fax cover sheet (links to outside document)

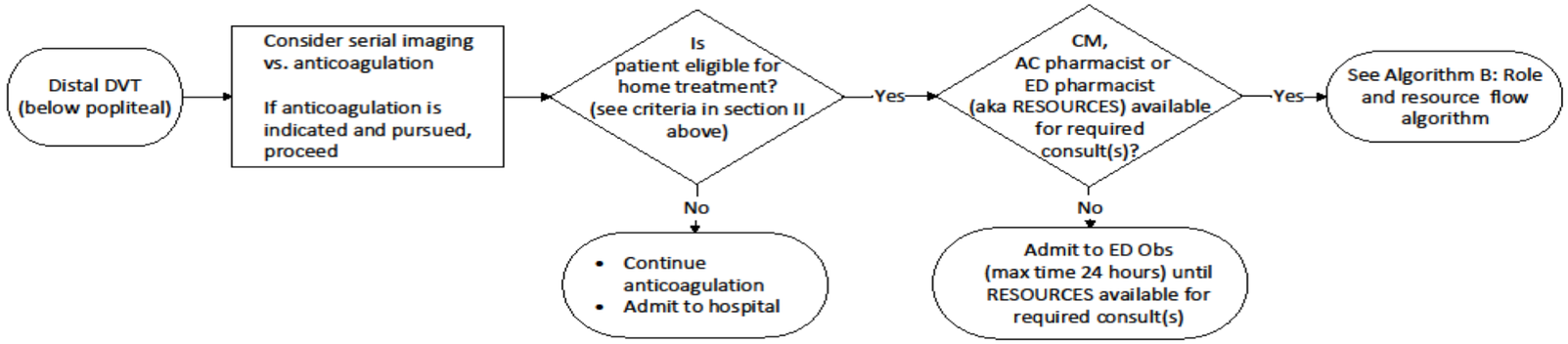
Reviewed by: Dusadee Sarangarm, MD; Pree Sarangarm, PharmD; Shannon Rankin, PharmD; Richard D'Angio, PharmD; Allison Burnett, PharmD; Meg Fletcher, PharmD; Trin Pham, PharmD; Frieda Ortega, PharmD; Deba Rihani, PharmD; Ali Ahmed, PharmD
Approved by: Antithrombosis Subcommittee 12/29/16
Last updated: 12/21/2016

Algorithm A: Disposition of acute DVT and PE (Please refer to main body of protocol for further details)

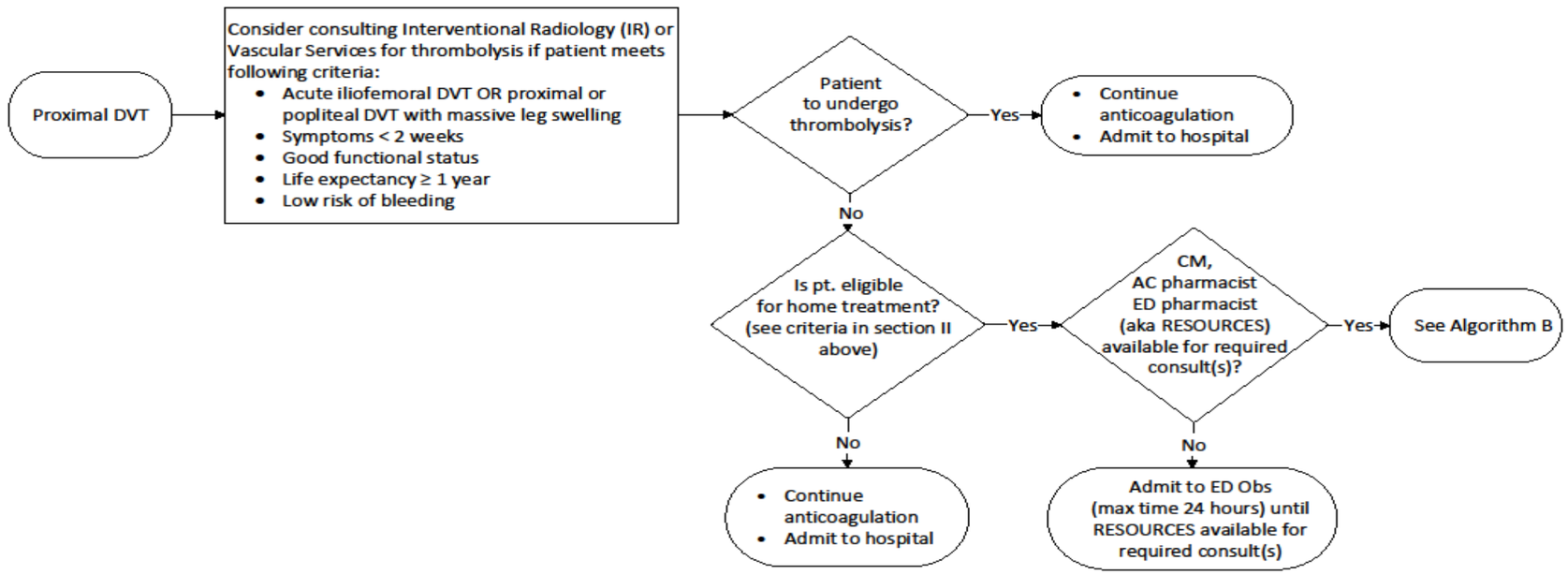
Use Acute VTE Power Plan to:

- **Initiate empiric anticoagulation with:**
  - Enoxaparin OR
  - High intensity heparin protocol (only if invasive procedure anticipated or if severe renal impairment)
- **Order diagnostic imaging & needed labs**

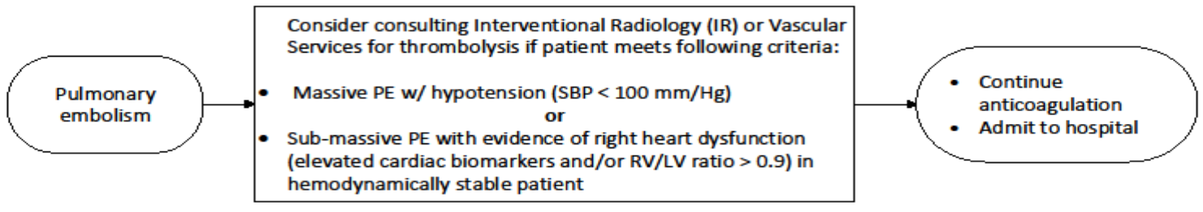
Distal DVT (below popliteal)



Proximal DVT



Pulmonary embolism



T:\LQIP\Inpatient Value Stream\ED Anticoagulation Flow Mapping
Created: 07/2016 Revised: 12/21/2016

Algorithm B: Role and resource flow algorithm (Please refer to main body of protocol for further details)

*Patient Care Area Pharmacist (PCAP)

ED Provider

ED VTE patient eligible for outpatient treatment

Notify IP Anticoagulation Service (AC) of pt. ASAP
(505-264-6970 7 days/week 0800-1630)

Outside above hours, notify ED PCAP of patient ASAP
(505-710-1533 1630-0130)

If neither entity is available (0130-0800), admit patient to Obs

Does patient have PCP?

- Yes → Is PCP within UNM Network: UNMH, IHS, Healthcare for Homeless, First Choice, First Nation
  - Yes → 1. Place an ad hoc referral for UNMH outpatient Anticoagulation Clinic
    ALSO
    2. If during clinic hours: Schedule f/u appt. within 5-7 days of discharge

    Outpatient Anticoagulation Clinic
    M-F 0800-1600
    505-272-6202 or 505-272-3971
    Closed all major holidays
  - No → CAP appt. available
    - Yes → ED Provider to make CAP appointment
    - No → No
- No → CAP appt. available
  - Yes → ED Provider to make CAP appointment
  - No → No

Inpatient Pharmacy Provider

AC Service or ED PCAP triages patient for DOAC clinical eligibility:
- Adequate organ function
- Lack of drug-drug interactions
- Reliability for adherence

Does patient meet clinical criteria for DOAC?

- Yes → AC Service or ED PCAP notifies ToC Service (505) 688-1920
  - Ensure f/u appointment is made with appropriate outpatient provider (UNMH Anticoagulation Clinic or PCP)
  - Ensure pt has Safety Net phone # (505-264-6970 or 505-306-8987) to call for any issues or barriers to care
  - Ensure patient receives anticoagulant education prior to discharge and that it is documented in the electronic medical record
  - PCAP should E-prescribe or fax prescriptions to ToC Service
- No → AC Service or ED PCAP recommends conventional therapy with enoxaparin and warfarin and notifies ToC Services (505) 688-1920
  - PCAP should E-prescribe or fax prescriptions to ToC Service

Resource	Phone	Hours	Comment
IP Anticoagulation Pharmacist	(505) 264-6970	0800-1630	7 days/week
IP Antithrombosis Pharmacist	(505) 306-8987	0800-1630	M-F
ED Pharmacist	(505) 710-1533	0700-0130	7 days/week

Transition of Care (ToC) Service

DOAC

Does the patient have Rx insurance?

- Yes → Is anticoagulant (DOAC or enoxaparin) covered?
  - Yes → Notify PCAP of coverage status
    anticoagulant covered and requires a prior authorization (PA)
    - D/C patient with anticoagulant and ToC Service follows up on PA
      - If any issues arise with RX processing (e.g. PA required, etc.), ToC Service should notify ED prescriber and aid in resolution of issue
      - For DOAC patients, enroll patient in non-government commercial insurance co-pay program if eligible, and provide 30-day free supply using sample card (samples should not be provided unless longitudinal access confirmed)
      - Anticoagulants should be delivered to beside whenever possible
  - Yes → Notify PCAP of coverage status
    anticoagulant covered and doesn't require prior authorization (PA)
    - Discharge patient with enoxaparin and warfarin
  - No → Notify PCAP of coverage status
    ToC Service will provide med waiver for 1-week supply of enoxaparin (call 272-1591 for instructions or questions)
    - Case Management must schedule financial appointment for patient prior to D/C from ED
- No (or Self Pay) → Notify PCAP of coverage status
  ToC Service will provide med waiver for 1-week supply of enoxaparin (call 272-1591 for instructions or questions)
  - Case Management must schedule financial appointment for patient prior to D/C from ED

Enoxaparin and warfarin

Resource	Phone	Hours	Comment
UNMH Pharmacy Discharge RX Service Leadership: Trinh Pham, PharmD	Fax Rx to: (505) 925-0638 Delivery Tech: (505) 350-2918 Direct Pharmacist Cell Phone: (505) 272-1591	Rx Processing: M-F 0800-2000 Sat: 0900-1800 SUNDAY CLOSED	Allow at least 2 hours for Rx processing
Transition of Care (ToC) Service Leadership: Ali Ahmed, PharmD	(505) 688-1920	TBD	

Case Management

Case Manager to aid ED provider in arranging follow-up appointment with a PCP

Resource	Phone	Hours	Comment
ED Social Work	(505) 951-9980	0800-2300	7 days/week
ED Daytime RN Case Manager	(505) 951-3320	0800-1800	
PM Nurse Case Manager	(505) 951-2871	1230-2300	