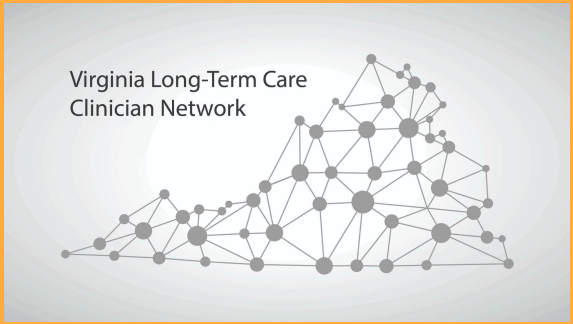
Virginia Long-Term Care Clinician Network

Monthly Forum
May 20, 2026



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The Virginia Long-Term Care Clinician Network is managed by VCU's Division of Geriatric Medicine, Virginia Center on Aging, and Department of Gerontology.

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Welcome!

As you join, please turn on cameras and mic or unmute your phone and say hello to your Virginia colleagues.

Any updates in the state or with you or your work?

Previous newsletters and other resources for you are at https://ltccn.vcu.edu/resources/

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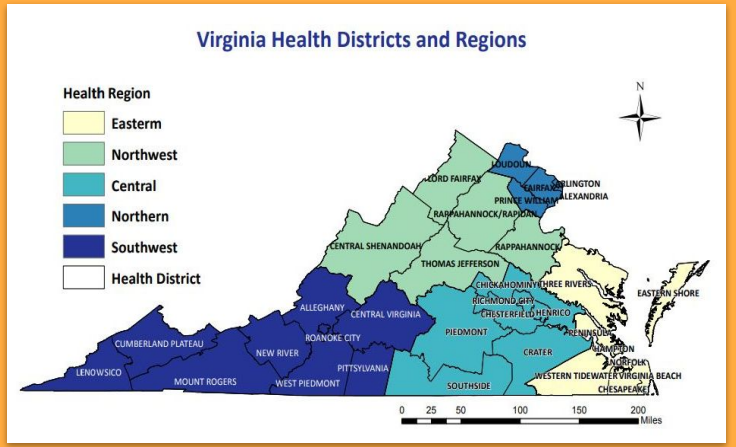
Welcome new members!

- **Regina Foster - Central Region**
- **Cherian Joseph - Northwest & Central Regions**



There are approximately 287 nursing homes and 580 assisted living facilities operating in Virginia. Within these, there are over 500 clinicians providing care. **We have 332 network members.** The Network provides ongoing learning and communication.

Remind your work colleagues to attend so they can get education, support and CME!

Disclosure of Financial Relationships

Disclosure of Commercial Support:
We acknowledge that no commercial or in-kind support was provided for this activity.

Anticoagulation in Post-Acute and Long-Term Care Medicine

Marisa Christensen, MD
VCU Health Division of Geriatrics

Indications for Anticoagulation

- Atrial flutter/fibrillation
- Mechanical heart valve
- Acute Venous Thromboembolism
- Post-op prophylaxis

Atrial fibrillation prevalence in PALTC

Prevalence rises with age, from 6.4% age 64-69 to up to 28.5% in those ≥85 yrs (VITAL-AF study)

High concentration of risk factors in PALTC settings—including dementia, high heart failure prevalence, and hypertension—makes AFib a common issue in this setting

Patients with AF in these settings are often associated with elevated Charlson Comorbidity Index scores, highlighting a complex, fragile patient population

VITAL-AF (Screening for Atrial Fibrillation Among Older Patients in Primary Care Clinics)

- Cluster-randomized trial of AF screening among individuals 65 yrs or older w/in 16 Mass General primary care practices
- This cohort study is a secondary analysis of the VITAL-AF trial and included 17 238 eligible patients

Table 1. Prevalence and Incidence of Atrial Fibrillation in Primary Care Patients 65 Years or Older

Table 1. Prevalence and Incidence of Atrial Fibrillation in Primary Care Patients 65 Years or Older

Characteristic	Prevalence of atrial fibrillation		Incidence of atrial fibrillation[a]	
	Population, No. (%)	Prevalence, % (95% CI)	Population person-years	Incidence rate, per 1000 person-years (95% CI)
Overall[b]	17 238	13.2 (12.5-13.9)	10 138	23.7 (21.0-26.7)
Age, y				
65-69	5505 (31.9)	6.4 (5.8-7.2)	3303	14.2 (10.8-18.8)
70-74	4651 (27.0)	10.3 (9.4-11.3)	2847	19.7 (15.2-25.5)
75-79	3360 (19.5)	15.1 (13.8-16.5)	1993	24.6 (19.0-31.9)
80-84	2011 (11.7)	22.4 (21.0-24.0)	1108	38.8 (29.3-51.5)
≥85	1711 (9.9)	28.5 (26.3-30.7)	886	50.8 (38.9-66.2)

Afib Management Challenges

studies suggest that nearly 30% of patients with atrial fibrillation may not receive anticoagulation medication, despite high stroke risks.

A significant portion of AF in this population is asymptomatic (up to one-third), complicating diagnosis.

Atrial flutter

Atrial flutter guidelines mirror those for atrial fibrillation

Focus on stroke risk reduction with CHA_2DS_2VASc score. Consider AC if ≥1 in men, ≥2 in women

CHA_2DS_2VASc

CHF (1)	HTN (1)	Age ≥75 (2)	DM (1)
Stroke/TIA/thromboembolism hx (2)	Vascular Disease (MI, PAD, aortic plaque) (1)	Age 65-74 (1)	Sex category-female (1)

CHA_2DS_2-VASc Interpretation/Mgmt

0 (males)/1 (females)-low risk/no tx needed

1(m)/2 (f)-intermediate risk-consider anticoagulation

≥2 (m), ≥3(f)-high risk-anticoagulation recommended

CHA_2DS_2-VASc Criteria	Score
Congestive heart failure/left ventricular dysfunction	1
Hypertension	1
Age ≥ 75	2
Diabetes mellitus	1
Stroke/TIA/thromboembolism	2
Vascular disease (prior MI, peripheral artery disease or aortic plaque)	1
Age 65-74yrs	1
Sex category (female gender	1

Total Score	Adjusted stroke rate (%/year)
0	0
1	1.3
2	2.2
3	3.2
4	4.0
5	6.7
6	9.8
7	9.6
8	6.7
9	15.2

Anticoagulation peri-ablation

- Pre- (3 wks) and post-(4 wks) cardioversion if AF>48 hrs or unknown
- Post-ablation-at least 4 wks
- DOACs generally preferred, except for mechanical prosthetic valve, moderate/severe mitral stenosis
- Bleeding risk assessment with HAS-BLED score for bleeding risk

HAS-BLED score

- Developed in 2010 to help clinicians identify modifiable risk factors and decide on level of monitoring needed, rather than serving as sole reason to withhold tx

HAS-BLED score

- Stratifies afib patients into 3 groups for 1 yr risk of major bleeding
- What is major bleeding?
  - Fatal bleeding requiring transfusion of ≥2U PRBCs
  - hemorrhage into a critical area or organ [eg, intracranial, intraocular, pericardial
  - overt bleed causing a fall in hemoglobin level of ≥2 g/dL

HAS-BLED score risk groups

- 0-1 low risk
- 2 moderate risk
- ≥3 high risk

HAS-BLED Score

- HTN (1)-uncontrolled SBP>160
- Abnormal renal (dialysis, transplant, creat>2.26) (1) or hepatic (cirrhosis, AST/ALT/AP>3x ULN w/ bili>2x ULN) fxn (1)
- Stroke
- Bleeding hx
- Labile INR-time in therapeutic range <60%
- Elderly-age>65
- Drugs/alcohol-concomitant antiplatelet agents, NSAIDs, or excess alcohol

HAS-BLED Criteria	Score
Hypertension	1
Abnormal renal or liver function (1 point each)	1 or 2
Stroke	1
Bleeding	1
Labile INRs	1
Elderly (> 65 years)	1
Drugs or alcohol (1 point each)	1 or 2

Total Score	Bleeds per 100 patient years
0	1.13
1	1.02
2	1.88
3	3.74
4	8.7
5	12.5

To Treat or not to treat?

- Current medical guidelines emphasize that decision to start anticoagulation should be based on a patients' underlying risk factors (CHA_2DS_2VASc), rather than Afib burden
- Episodes as short as 5-6 min have been linked to inc risk of stroke
- Paradigm shift: clinical classification of afib->quant classification using long-term rhythm monitoring->estimate afib burden->refined risk prediction, therapy selection, and clinical research and its interaction and influence on outcomes

Left Atrial Occlusion Devices

Watchman, Amulet

Non-valvular afib

High stroke risk

History of major bleeding while on anticoag

High bleeding risk (renal failure, liver disease, low platelets, conditions requiring concurrent plt therapy)

Increased risk of falls/trauma?

Life expectancy of >1 yr

LAOD

Afib responsible for approx. 15% of all strokes. Per CDC, >795,000 new strokes/yr in US->~120K strokes due to afib annually.

large-scale study using the American National Cardiovascular Data Registry revealed that only 44.9% of patients with AF received OAC therapy. European data further demonstrated that only 50% of AF patients are receiving OAC therapy, with the discontinuation rate reaching as high as 70% after a 5-year follow-up.

PROTECT-AF trial demonstrated the noninferiority of the LAOD to warfarin in preventing the combined outcomes of stroke, systemic embolism (SE), and cardiovascular death, as well as a superiority for cardiovascular and all-cause mortality

Mechanical Heart Valves

VKAs/warfarin-DOACs did poorly in clinical trials on clot prevention on mechanical surfaces

Target INR: Atrial position usually 2.0-3.0, Mitral position usually 2.5-3.5

Acute Venous Thromboembolism

Acute DVT

- Prox and distal LE veins, upper extremity DVTs, catheter-associated DVTs

Pulmonary embolism

- Incidentally discovered asymptomatic PE, massive PE, criteria for admitting and discharging patients with acute PE

Acute Venous Thromboembolism Morbidity & Mortality

VTE occurs in 1-2/1000/yr

One third of pts with newly dxed VTE present with PE

Incidence of VTE increases with age-as high as 1/100 in >80 y/o

Medical inpatients AND LTC residents are at increased risk of VTE, as are long-distance travelers(>4 hrs by air) and people with minor injuries-make up 20-25% of all VTEs

Patients with cancer account for approx. 20% of all VTE cases

For pt with unprovoked VTE, risk of recurrence after completing tx course of anticoag is 10% in 2 years

Acute Venous Thromboembolism Key Treatment Guidelines

- Minimum 3 months is standard. Extended, indefinite therapy recommended for recurrent, unprovoked VTE, or those with high risk of recurrence
- Management divided into acute phase (0-21 days), long-term phase(3-6 mo) and extended phase (beyond 6 months)
- DOACs preferred over VKAs for initial, early, and long-term treatment
- Initial Management includes LMWH, fondaparinux, or rivaroxaban/apixaban
- LMWH or DOAC for cancer-assoc thrombosis

Outcomes	Relative effect: RR (95% CI)	Anticipated absolute effects (95% CI)	
		Risk with stopping	*Risk difference with indefinite anticoagulation*
Mortality	**0.75** (0.49-1.13)	18 per 1,000	**5 fewer deaths per 1,000** (9 fewer to 2 more)
PE	**0.29** (0.15 to 0.056)	29 per 1,000	**21 fewer PE per 1,000** (25 fewer to 13 more)
DVT	**0.20** (0.12 to 0.34)	63 per 1000	**50 fewer DVT per 1,000** (56 fewer to 42 fewer)
Major bleeding	**2.17** (1.40 to 3.35)	5 per 1,000	**6 more bleeds per 1,000** (2 more to 12 more)

- Per ASH clinical practice guidelines, after primary tx for patients with unprovoked DVT or PE, indefinite antithrombotic therapy is suggested.
- Lower-dose (apixaban 2.5 bid, rivaroxaban 10 QD) for indef tx

Acute Venous Thromboembolism Length of Therapy

Provoking Risk Factors for VTE

Transient Risk Factors
(resolve after provoked VTE)

MAJOR Risk Factor (occurs within 3 mth)

- Surgery, gen anesthesia > 30 min
- Confined to hospital bed ≥ 3 days with acute illness
- Cesarean section

MINOR Risk Factor (occurs within 2 mth)

- Estrogen therapy (OCP, HRT)
- Pregnancy, puerperium
- Confined to bed out of hospital ≥ 3 days with acute illness
- Leg injury, reduced mobilty ≥ 3 days

Chronic (Persistent) Risk Factors
(persistent after VTE occurs)

- Active cancer (ongoing chemo; recurrent or progressive disease)
- Inflammatory bowel disease
- Autoimmune disorder (e.g., antiphospholipid syndrome, rheumatoid arthritis)
- Chronic infection
- Chronic immobility (e.g., spinal cord injury)

Treatment of Provoked VTE

If transient risk factors:

- 3-6 months
- No secondary prevention
- If stable CVD, consider stopping ASA while on DOAC
- For recurrent provoked VTE, rec still for 3-6 months therapy without long-term tx rec

If persistent risk factors

- Indefinite antithrombotic therapy

Upper extremity VTE

CVC associated	•When catheter no longer needed/not functioning, remove and anticoag x 3 months •When catheter still needed and remains functional, continue to treat with anticoag for either 3 months, or as long as the catheter is in place, whichever is longer
Proximal vein involvement	•Brachiocephalic, IJ, subclavian, axillary, brachial •at least 3 months, longer if unprovoked
Distal involvement (radial/ulnar vein)-tx recommended if acceptable bleeding risk and any of:	•Active cancer •Hx prior VTE •Unprovoked •w/in close prox to a proximal vein •Alternative: serial compression US surveillance •if no catheter or cancer, consider hematology consult

Distal (calf) DVT

Ant/post tibial, peroneal, gastric, soleus	Consider/Treat with 3 mo anticoagulant therapy if:	Surveillance with serial compression Doppler US exams weekly for 2 wks evaluating for extension of thrombus (preferred for gastroc)
	• Active cancer • Hx prior VTE • Thrombosis not provoked • Signif calf pain • Immobility • Multiple tibial/peroneal vein involvement • Located <3 cm from popliteal vein	

VTE prophylaxis in medical patients

Half of VTE events occur due to hospital admission for surgery (24%) or medical illness (22%)

Risk factors for VTE in hospital include cancer, older age, prior VTE, central lines, immobility

40% of hospitalized patients have 3 or more risk factors for VTE

Increase in thrombosis risk in medical inpatients persists **45 to 60 days** after discharge

Routine post-discharge extended prophylaxis not recommended

Extended prophylaxis ***may*** reduce PE and DVT, but absolute impact on VTE reduction is very small (1 to 3 fewer VTE per 1,000 patients treated), and is similar to number of bleeding events caused

Extended prophylaxis does not impact mortality

Possible that the three included RCTs (APEX, MAGELLAN, ADOPT) did not select patients at sufficiently high risk for VTE

- However, the recent **MARINER trial** *(Spyropoulos NEJM 2018)* also did not show significant reduction in VTE despite use of a **modified IMPROVE VTE risk score** to select high-risk medical inpatients for extended prophylaxis with rivaroxaban

Extended prophylaxis (30-40 days) compared with **in-hospital prophylaxis** (any agent):

Outcomes	Relative effect: RR (95% CI)	Anticipated absolute effects (95% CI)
		Risk difference with extended prophylaxis
Mortality	1.00 (0.89 to 1.12)	**0 fewer deaths per 1,000** (5 fewer to 5 fewer)
PE	0.63 (0.39 to 1.03)	**1 fewer PE per 1,000** (3 fewer to 0 fewer)
Symptomatic proximal DVT	0.54 (0.32 to 0.91)	**3 fewer DVT per 1,000** (4 fewer to 1 fewer)
Major bleeding	2.09 (1.33 to 3.27)	**4 more bleeds per 1,000** (1 more to 8 more)

Future priorities for research

Utility of prophylaxis in high-risk chronically ill/nursing home patients

VTE prophylaxis in surgical patients

Surgery accounts for 25% of VTE in the community, even with current prophylaxis strategies

Post-op VTE risk **variable by procedure**; *higher risk* in joint arthroplasty, neurosurgery, vascular surgery, others

Post-op VTE may cause over 50,000 deaths annually in the United States

VTE after surgery often occurs **after hospital discharge** (particularly with shorter hospital admissions)

THA or TKA

- Either aspirin or anticoagulants.
- Very low certainty evidence for any net health benefit or harm between two modalities.
- Studies ongoing comparing these options using clinically relevant endpoints
- DOAC favored over LMWH
- Benefits/harms appear to be similar for each DOAC

Outcomes	Relative effect (95% CI)	Anticipated absolute effects (95% CI)	
		*Risk with **Short-term***	*Risk difference with **Extended***
Mortality	**RR 0.94** (0.64 to 1.39)	16 per 1,000	**1 fewer death per 1,000** (6 fewer to 6 more)
Symptomatic PE	**RR 0.44** (0.22 to 0.85)	8 per 1,000	**4 fewer PE per 1,000** (6 fewer to 1 fewer)
Symptomatic proximal DVT	**RR 0.30** (0.21 to 0.42)	16 per 1,000	**12 fewer DVT per 1,000** (13 fewer to 10 fewer)
Major bleeding	**RR 1.00** (0.59 to 1.70)	8 per 1,000	**0 fewer bleeds per 1,000** (3 fewer to 6 more)

Length of prophylaxis

- Date largely limited to hip and knee arthroplasty, cancer general surgical procedures. More studies needed in other surgical scenarios
- extended prophylaxis (19-42 days) recommended over short-term (4-14 day) prophylaxis

Major Neurosurgical Procedures

ASH suggests against using pharmacological prophylaxis

Benefit of pharmacological prophylaxis after neurosurgical procedures is likely small

- While observational data favor pharmacologic prophylaxis, randomized data suggest lower risk reduction in VTE
- Benefits of pharmacological prophylaxis often seen in asymptomatic DVT using screening venography, which may not be as clinically important

Harms of major bleeding from pharmacologic prophylaxis are moderate due to greater potential for morbidity from this surgical site

Effective prophylaxis can be provided via mechanical methods

Anticoagulation for high risk neurosurgery patients

- pharm prophylaxis may be considered for
  - Subgroup of patients at higher thrombosis risk, including those with prolonged immobility after surgery
  - NSU procedures with lower risk of major bleeding
  - persistent mobility restriction after immediate post-surgical bleeding risk has subsided
  - LMWH preferred over UFH

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Open Forum

Any questions or ideas from the talk?

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Thank you for joining us!

Upcoming Forums:

- **June 17**
- **July 15**

Your Calendar Link - In the email reminder you received, there's a calendar link to update your calendar for future meetings.

On your way out of our meeting today, kindly answer a brief feedback survey.

Invite your colleagues! They can register at ltccn.vcu.edu