



Welcome to Telligen's Project ECHO® Series: Anticoagulants in Long-Term Care

What Prescribers and Pharmacists Should Know About Anticoagulant Best Practices

We will get started momentarily

- Using chat, enter your organization and state
- Please complete the poll

A Project ECHO® Series: Anticoagulant Use in Long-Term Care

What Prescribers and Pharmacists Should Know About Anticoagulant Best Practices – Session 2

August 10, 2023

Denton Chancey, PharmD, MBA



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Before We Begin

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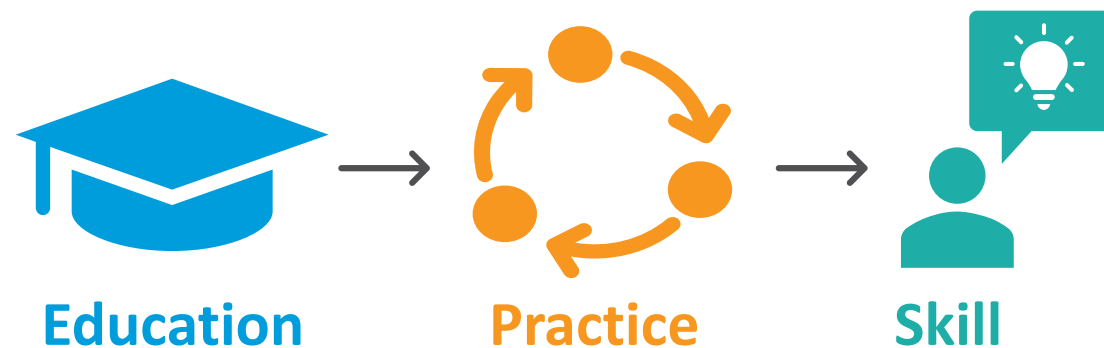
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Begin With the End in Mind

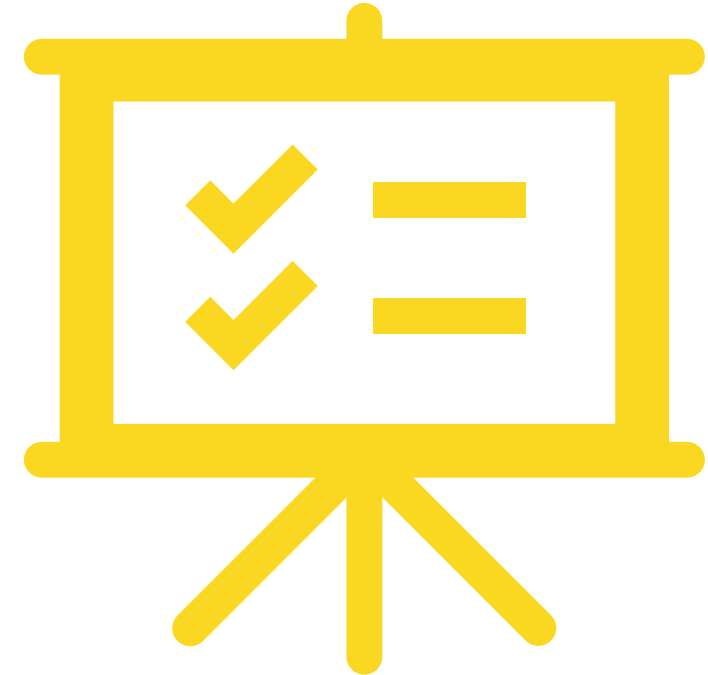
During the presentation, visualize and plan how you will use the information:

- What impactful actions can you take as a result of the information shared today?
- How are you able to increase collaboration within your network to ensure a true change in patient safety?
- Based on what you heard today, what activities do you currently have underway that can leverage immediate action over the next week, 30, 60 and 90 days?



Objectives

- Discuss the relative efficacy and safety profiles of apixaban and dabigatran compared to warfarin
- Identify indications for which warfarin is the most appropriate therapy



Today's Speaker



Dr. David Shepherd DO, MBA, MS, CMD
Internal Medicine and Medical Director
Colorado Springs, CO

Efficacy of Direct Oral Anticoagulants (DOACs) Compared to Warfarin

Hazard Ratio Relative to Warfarin*	Apixaban	Dabigatran	Rivaroxaban
Stroke or systemic embolism	0.62	0.85	0.84*
Ischemic stroke	0.83*	0.74	0.77
Hemorrhagic stroke	0.86*	0.68	0.84*
All-cause mortality	0.83*	0.77	0.81*
<i>*Not all results statistically significant</i>			

Safety of Direct Oral Anticoagulants (DOACs) Compared to Warfarin

Hazard Ratio Relative to Warfarin*	Apixaban	Dabigatran	Rivaroxaban
Major bleeding	0.62	0.99*	1.01*
Intracranial bleeding	0.48	0.41	0.56
Gastrointestinal bleeding	0.68	1.47	0.92*
<i>*Not all results statistically significant</i>			

Valvular Versus Nonvalvular Atrial Fibrillation

- Non valvular atrial fibrillation (A-fib) → Direct oral anticoagulants (DOACs) preferred
- Valvular A-fib → Warfarin preferred
- Valvular A-fib is A-fib in the setting of moderate-severe mitral stenosis
- Valvular A-fib is an indication for long-term warfarin therapy
- Nonvalvular A-fib is A-fib in absence of moderate-severe mitral stenosis or a mechanical valve. It may include mild stenosis or regurgitation of the heart valves

January CT, Wann LS, Calkins H. 2019 AHA/ACC/HRS focused update of the 2014 AHA/ACC/HRS guideline for ... 2019 AHA/ACC/HRS Focused Update of the 2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society in Collaboration With the Society of Thoracic Surgeons. 2019. Accessed August 1, 2023. <https://www.ahajournals.org/doi/10.1161/CIR.0000000000000665>.

Atrial Fibrillation with Rheumatic Mitral Stenosis

- Atrial Fibrillation (A-fib) + Rheumatic Mitral Stenosis → Warfarin is still the preferred agent
- [Rivaroxaban in Rheumatic Heart Disease – Associated Atrial Fibrillation | NEJM](#)

Among patients with rheumatic heart disease–associated atrial fibrillation, vitamin K antagonist therapy led to a lower rate of a composite of cardiovascular events or death than rivaroxaban therapy, without a higher rate of bleeding. (Funded by Bayer; INVICTUS ClinicalTrials.gov number, [NCT02832544](#))
- [Rheumatic mitral stenosis: Overview of management](#)
- For patients with MS requiring anticoagulation (for AF, left atrial thrombus or an embolic event) recommend a vitamin K antagonist (VKA; e.g.; [warfarin](#)) rather than a direct oral anticoagulant (DOAC). (See [Warfarin and other VKAs: Dosing and adverse effects.](#))

Anticoagulation for Prosthetic Heart Valves

- Mechanical Valves → Warfarin for life
 - Warfarin is the only approved drug for prevention of thromboembolism in mechanical heart valves
- Bioprosthetic Valves → 3-6 months warfarin followed by antiplatelet monotherapy
 - Surgical bioprosthetic valves are generally treated with warfarin anticoagulation for 3-6 months followed by monotherapy with an antiplatelet agent
 - Transcatheter aortic valves are typically treated with antiplatelet monotherapy

Anticoagulation for Clotting Disorders

- **It's complicated. Consult Hematology.**
- Hereditary:
 - Factor V Leiden
 - Protein C & S deficiency
 - Hyperhomocysteinemia
 - Antithrombin III deficiency
 - Prothrombin 20210 mutation
 - Hereditary thrombophilia
- Acquired:
 - Antiphospholipid antibody syndrome

Prevalence of inherited thrombophilia and associated VTE risk

Thrombophilia	Prevalence (%)		Relative risk of a first episode of VTE compared with controls
	General population	Individuals with VTE	
AT deficiency	0.02 to 0.2%	1 to 7%	16-fold increased
Protein C deficiency	0.2 to 0.5%	2 to 5%	7-fold increased
Protein S deficiency	Unknown	1%	5-fold increased
Factor V Leiden*	2 to 5%	12 to 18%	4- to 5-fold increased
Prothrombin G20210A*	2%	5 to 8%	3- to 4-fold increased

These prevalences and risk estimates were aggregated from multiple studies. Refer to UpToDate content on specific inherited thrombophilias for further information on risk factors, indications for testing, and management. For FVL and prothrombin G20210A, values refer to heterozygotes. If the individual is homozygous for the defect, the risk of VTE is expected to be considerably higher. VTE risk also depends on other factors such as age and comorbidities.

VTE: venous thromboembolism; AT: antithrombin; FVL: factor V Leiden.

* Applies to White populations; prevalence is much lower in other groups.

Case Studies

- 60-year-old patient with no significant past medical history and new onset atrial fibrillation (A-fib)
 - A. Aspirin
 - B. Warfarin
 - C. Xarelto (rivaroxaban)
 - D. Eliquis (apixaban)

- 81-year-old patient with new onset A-fib and creatinine of 1.6mg/dL
 - A. Aspirin
 - B. Warfarin
 - C. Xarelto (rivaroxaban)
 - D. Eliquis (apixaban)

Resource

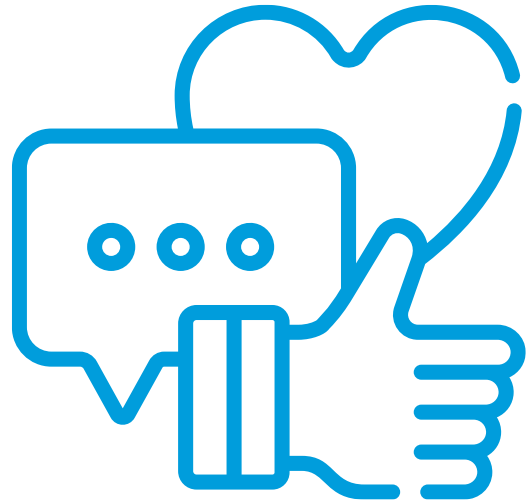
2019 AHA/ACC/HRS Focused Update of the 2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society in Collaboration With the Society of Thoracic Surgeons

<https://www.jacc.org/doi/10.1016/j.jacc.2019.01.011>

Next Steps – Lead into Action

- Understand that warfarin is no longer the first-line agent for most anticoagulation indications
- Reevaluate all patients currently receiving warfarin therapy
- Consider apixaban (Eliquis) for patients with an indication

How Did We Do? Let Us Know:



Please fill out the poll before logging off

Project ECHO® Series on Anticoagulant Best Practices for Prescribers and Pharmacists

Lunch with us for 30 minutes

11:30 a.m. MST/12:30 p.m. CST

Final ECHO® Session Date and Topic:

- Session 3: Thursday August 17, 2023 – Uses for Direct Oral Anticoagulants (DOACs)



[Learn more and register](#)

Access prior session presentations and recordings [here](#)

Contact Us



- Denton Chancey, Telligen’s Clinical Pharmacy Specialist dchancey@telligen.com
- Partnership for Community Health Team caretransitions@telligen.com
- Nursing Home Team nursinghome@telligen.com
- General Inquiries | QIConnect@telligen.com
- www.telligenqiconnect.com



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