

Oral Anticoagulation 101: What You Need To Know



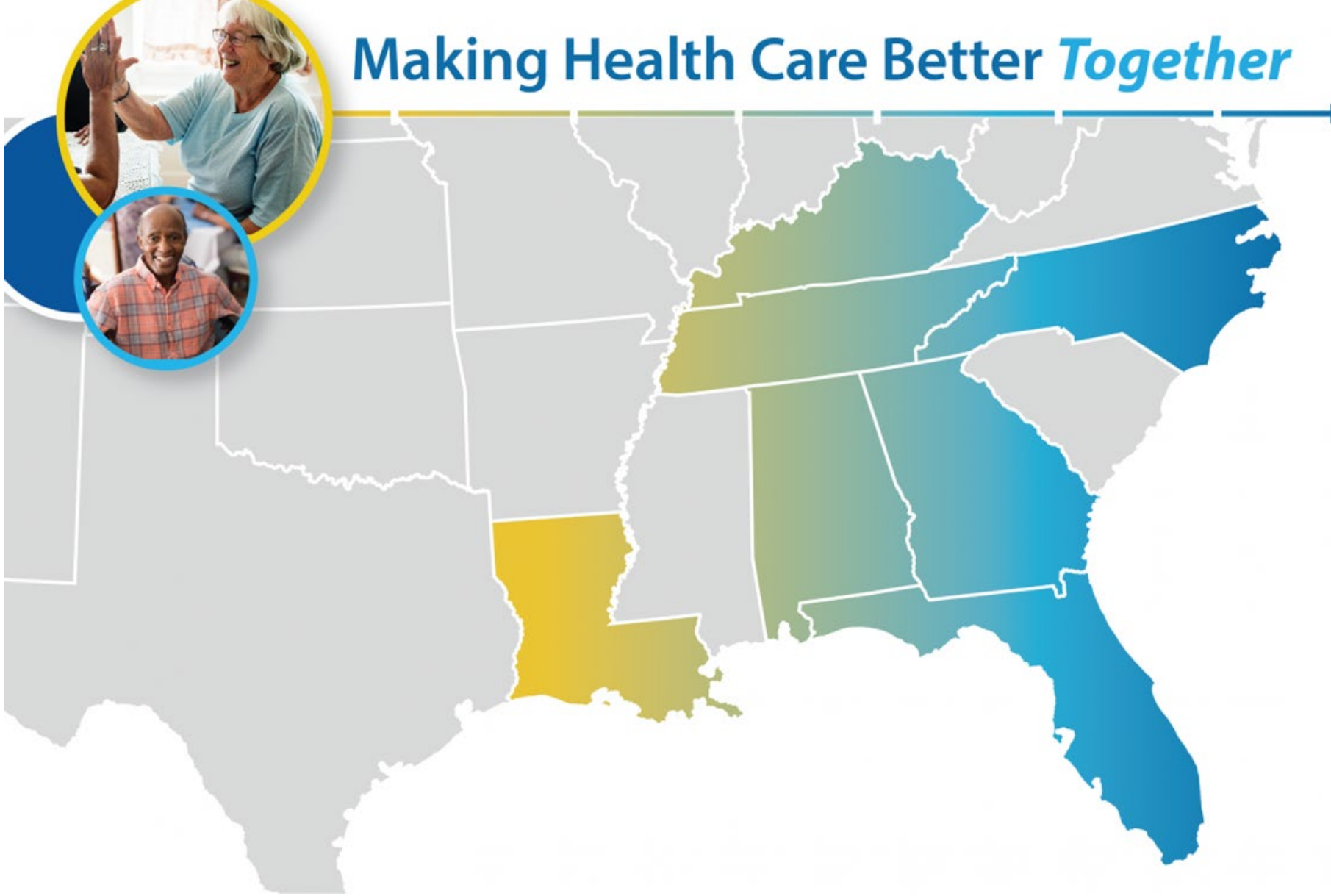
Presented by:
Tanya Vadala, Pharm.D.

March 27, 2024

 **ALLIANT**
HEALTH SOLUTIONS

QIN-QIO
Quality Innovation Network -
Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
QUALITY IMPROVEMENT & INNOVATION GROUP

Making Health Care Better *Together*



About Alliant Health Solutions

 **ALLIANT**
HEALTH SOLUTIONS

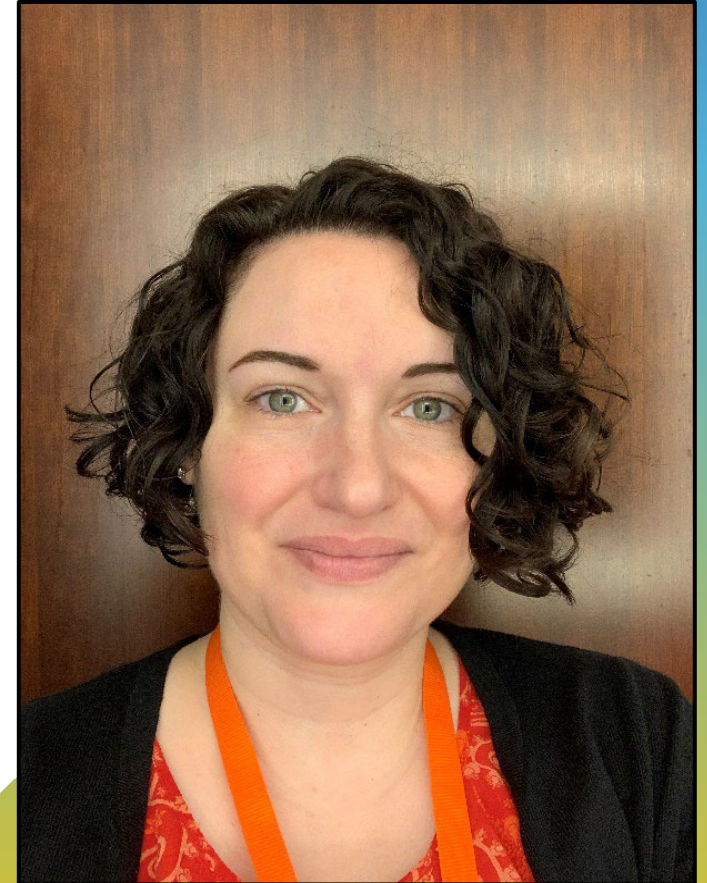
QIN-QIO
Quality Innovation Network -
Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
EQUALITY IMPROVEMENT & INNOVATION GROUP

Tanya Vadala, Pharm.D.

MEDICATION SAFETY PHARMACIST

Tanya is an IPRO pharmacist with 20 years of clinical pharmacy, community pharmacy, academia, quality improvement and medication safety experience. Before joining IPRO, she worked at various community pharmacies and taught at Albany College of Pharmacy and Health Sciences in Albany, N.Y. She specializes in Medication Therapy Management (MTM), medication reconciliation, opioids, immunizations, and patient self-care. Her formal teaching experience includes courses in pharmacy practice and clinical experiential teaching.

Contact: TVadala@ipro.org



Objectives

- Recognize common oral anticoagulant medications
- Distinguish between different oral anticoagulant medications
- Summarize issues that can occur with anticoagulant medications
- Identify ways to decrease clot risk

The content in this presentation was current as of Jan. 29, 2024.

Common Oral Anticoagulation Medications

- Vitamin K antagonist:
 - Warfarin
- Factor Xa inhibitors:
 - Apixaban (Eliquis®)
 - Rivaroxaban (Xarelto®)
 - Edoxaban (Savaysa®)
- Direct thrombin inhibitor:
 - Dabigatran (Pradaxa®)

Warfarin

Warfarin: Box Warning

Box Warning:

Can cause major or fatal bleeding. Perform regular monitoring of the international normalized ratio (INR) on all treated patients. Drugs, dietary changes, and other factors affect INR levels achieved with warfarin therapy. Instruct patients about prevention measures to minimize the risk of bleeding and to report immediately to their health care provider signs and symptoms of bleeding.

*Regular blood testing is needed to prevent adverse outcomes.

Warfarin: Testing

Blood testing methods

- Prothrombin Time (PT): measures how long it takes blood to clot
- International Normalized Ratio (INR): uses PT to measure the body's ability to form a clot
- Partial Thromboplastin Time (PTT): measures how long it takes blood to clot
- PT/INR is the most commonly used

What Does an Increased/Decreased INR Mean?

- Increased or Higher INR = blood clots more slowly (risk of bleeding)
- Decreased or Lower INR = blood clots more quickly (risk of clotting)

Warfarin: Other Things To Know

- Foods high in vitamin K can cause INR to decrease:
 - Spinach, Broccoli, collard greens, kale, and Brussel sprouts (dark leafy greens)
 - Others?
- Warfarin tablet colors:

| | | |
|----------------|-----------------|----------------|
| 1 mg: Pink | 3 mg: Brown/Tan | 6 mg: Teal |
| 2 mg: Lavender | 4 mg: Blue | 7.5 mg: Yellow |
| 2.5 mg: Green | 5 mg: Peach | 10 mg: White |

Please **L**et **G**reg **B**rown **B**ring **P**eaches **T**o **Y**our **W**edding

Warfarin: Drug Interactions

Warfarin interacts with many medications

- Consult with a physician and/or pharmacist:
 - When warfarin is added or removed
 - When any medication is added or removed

Factor Xa Inhibitors

Box Warnings: Factor Xa Inhibitors

Apixaban & Rivaroxaban

- Premature discontinuation increases the risk of thrombotic events
- Spinal/Epidural hematomas

Edoxaban

- Same as above
- Reduced efficacy in nonvalvular atrial fibrillation patients with CrCl > 95 mL/minute

Factor Xa Inhibitors

- **Rivaroxaban (Xarelto®):**
 - Doses ≥ 15 mg must be taken with food
- **Apixaban (Eliquis®) and edoxaban (Savaysa®):**
 - Can be taken without regard to meals
- Xa Side effects: Generally well tolerated, but bleeding and clotting can occur

| Medication | Formulations |
|------------------------|-------------------|
| Apixaban (Eliquis®) | Tablet |
| Rivaroxaban (Xarelto®) | Tablet and packet |
| Edoxaban (Savaysa®) | Tablet |

Direct Thrombin Inhibitor

Box Warnings: Direct Thrombin Inhibitor

Dabigitran

- Thrombotic events
- Spinal/Epidural hematoma

Direct Thrombin Inhibitor

Dabigatran (Pradaxa®):

- Formulations: capsule and oral packet (pellets)
- Side effects:
 - Bleeding (mainly GI bleed)
 - Dyspepsia
 - Gastritis-like symptoms
- Pearls:
 - Swallow capsules or pellets whole or mix pellets with soft food like apple sauce. (can not be administered via NG tube)
 - Discard four months after opening bottle (must remain in manufacturer bottle)

Bleeding Risk

- ISMP considers all anticoagulants as high-risk medications
- Signs of bleeding due to anticoagulation:
 - Bruising
 - Blood in stool
 - Dark and tarry-looking stools
 - Blood in urine
 - Coughing or vomiting up blood (sometimes looks like coffee grounds)
 - Bleeding from gums or nose

Clot Risk

- Deep Vein Thrombosis:
 - Skin warm to touch
 - Redness, pain, or tenderness
 - Swelling
- Pulmonary Embolism:
 - Trouble breathing
 - Severe chest pain
 - Coughing blood

Clot Risk (continued)

- Myocardial Infarction:
 - Chest pain
 - Left arm pain
 - Trouble breathing
 - Nausea/vomiting or stomach pain (in women)
- Stroke:
 - Slurred speech
 - Facial droop
 - Weakness in arms or legs
 - Unilateral numbness or weakness

Venous Thromboembolism (VTE) Risk Factors

TABLE 2

Potential risk factors for venous thromboembolism in long-term care residents

Age > 75 years

Decreased mobility (unable to walk without assistance)

Previous venous thromboembolism

Recent hospitalization for surgery or other illness

Ischemic stroke

Congestive heart failure

Chronic obstructive or interstitial lung disease

Severe inflammatory disease

Active cancer

Severe infectious disease

Clot Risk in Nursing Homes

Patients in Nursing homes have a 30x higher rate of DVT and PE than the general population.

Tips to decrease clot risk:

- Moderate activity every day (walking)
- Avoid long periods of staying still
- Weight loss
- Ankle exercises
- Wear compression socks
- Take medications as directed

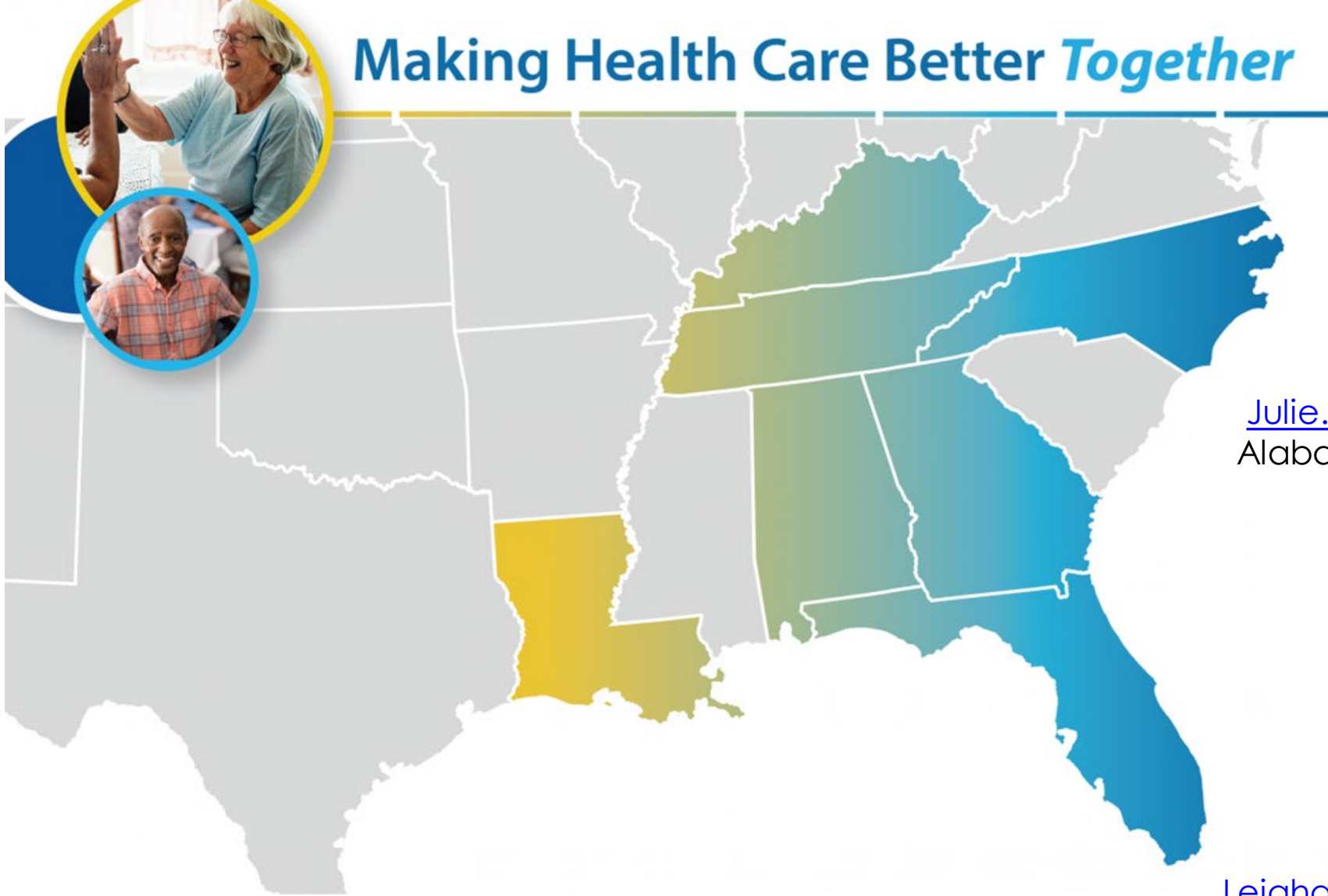
Resources

- <https://www.ncbi.nlm.nih.gov/books/NBK441964/>
- https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/214358s000lbl.pdf
- https://www.accessdata.fda.gov/drugsatfda_docs/label/2011/022512s007lbl.pdf
- <https://www.ncbi.nlm.nih.gov/books/NBK519025/>
- <https://www.cdc.gov/ncbddd/dvt/infographic-risk.html>
- <https://pubmed.ncbi.nlm.nih.gov/20124270/>
- https://www.stoptheclot.org/learn_more/dvt/

Questions?



Making Health Care Better *Together*



Julie Kueker

Julie.Kueker@AlliantHealth.org
Alabama, Florida and Louisiana



Leighann Sauls

Leighann.Sauls@AlliantHealth.org
Georgia, Kentucky, North Carolina and Tennessee

Program Directors

Making Health Care Better *Together*



ALABAMA • FLORIDA • GEORGIA • KENTUCKY • LOUISIANA • NORTH CAROLINA • TENNESSEE



@AlliantQIO



Alliant Health Solutions



@AlliantQIO



AlliantQIO

This material was prepared by Alliant Health Solutions, a Quality Innovation Network – Quality Improvement Organization (QIN – QIO) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. Publication No. 12SOW-AHS-QIN-QIO TO1-NH TO1-PCH-5269-02/14/24

 **ALLIANT**
HEALTH SOLUTIONS

QIN-QIO
Quality Innovation Network -
Quality Improvement Organizations
CENTERS FOR MEDICARE & MEDICAID SERVICES
EQUALITY IMPROVEMENT & INNOVATION GROUP