

# A Deeper Dive Into Anticoagulant & Diabetes Medication Adverse Drug Events (ADEs)

## Welcome!

- All lines are muted, so please ask your questions in Q&A
- For technical issues, chat to the 'Technical Support' Panelist
- Please actively participate in polling questions that will pop up on the lower righthand side of your screen

**We will get  
started shortly!**



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The Quality Improvement Services Group of  
ALLIANT HEALTH SOLUTIONS

# Tanya Vadala, Pharm.D.

## MEDICATION SAFETY PHARMACIST, IPRO

Tanya is an IPRO pharmacist with 17 years of clinical pharmacy, community pharmacy, academia, quality improvement and medication safety experience. Prior to joining IPRO, she worked at various community pharmacies and taught at Albany College of Pharmacy and Health Sciences in Albany, NY. 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:

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# Objectives

- Learn Today:
  - Define Adverse Drug Event (ADE)
  - Review common ADEs for anticoagulants and diabetes medications
  - Identify risk factors for anticoagulant and diabetes medication ADEs
  - Examine patient cases
  - Determine if the cases were ADE related
- Use Tomorrow:
  - Use the materials learned from the LAN to prevent and identify ADEs in practice

# Definitions

**ADE** = Adverse Drug Event

**CDC:** An adverse drug event (ADE) is when someone is harmed by a medicine.<sup>1</sup>

**CMS:** An injury resulting from drug-related medical interventions.<sup>2</sup>

# Types of ADEs<sup>3</sup>

**Preventable ADEs:** result from a medication error that reaches the patient and causes any degree of harm. It is generally estimated that about half of ADEs are preventable.

**Non-preventable ADEs:** when medications are prescribed and administered appropriately. These are commonly known as side effects.

# Polling

1. How often are you monitoring PT/INR?
  - a. Daily
  - b. 2x per week
  - c. Weekly
  - d. Monthly
2. Have you seen any changes to anticoagulant use since COVID began? Y|N

# Anticoagulant ADEs<sup>2</sup>

## Bleeding

- Elevated PT/INR, PTT
- Low platelet count
- Bruising
- Nosebleeds
- Bleeding gums
- Coughing up blood
- Prolonged bleeding from wound, IV, or surgical sites
- Blood in urine, feces, or vomit
- Abrupt onset hypotension

# Anticoagulant ADEs Continued<sup>2</sup>

## Thromboembolism/Clotting

- Pain or tenderness and swelling of upper or lower extremity
- Increased warmth, edema and/or erythema of affected extremity
- Unexplained shortness of breath
- Chest pain
- Coughing
- Hemoptysis
- Feelings of anxiety or dread



# Anticoagulant ADE Risk Factors<sup>2</sup>

## Bleeding

- Anticoagulant, antiplatelet, or thrombolytic medication use
- Concurrent use of more than one antithrombotic medication (e.g., aspirin)
- History of stroke or GI bleed
- NSAID medication use while on anticoagulants
- Antibiotics use
- Amiodarone use
- Dietary changes affecting vitamin K intake (e.g., dark leafy greens)

## Thromboembolism

- Anticoagulant medication used
- Prolonged immobility
- Recent major surgery
- Prior history of venous thromboembolic events
- Consistently subtherapeutic PT/INR

# Anticoagulant Related Interventions<sup>2</sup>

## Bleeding

- Stat order for PT/INR, PTT, platelet count, or CBC
- Abrupt stop order for medication
- Administration of Vitamin K
- Transfer to hospital

## Thromboembolism

- Stat order for PT/INR
- Stat chest x-ray
- Stat scan for DVT
- Transfer to hospital

# Case #1

92-year-old female is reporting black bowel movements. She recently started using naproxen for back pain.

## Medications:

- Hydrocodone/APAP 5/325mg QID PRN
- Warfarin 5mg QD
- Metoprolol XR 50mg QD
- Naproxen 500mg BID

## Case #2

78-year-old male resident is complaining of chest pain. He just started eating healthy to help lose weight.

### Medications:

- Hydrocodone/APAP 5/325mg QID PRN
- Amlodipine 10mg QAM
- Warfarin 3mg QD

# Polling

1. How often do you monitor resident's blood glucose?  
(Select any or all that apply)
  - a. Upon waking
  - b. Before meals
  - c. 1-2 hours after meals
2. Do you have residents using continuous glucose monitoring? Y|N

# Diabetes Medication ADEs<sup>2</sup>

## Hypoglycemia/Low Blood Glucose

- Hypoglycemia (e.g., <50mg/dl)
- Falls
- Headache
- Shakiness, nervousness, anxiety
- Sweating, chills, clamminess
- Irritability, impatience
- Change in mental status
- Weakness, fatigue, or somnolence
- Incoordination
- Seizures
- Emotional changes (including new anger, sadness, stubbornness)
- Lightheadedness, dizziness
- Hunger
- Nausea
- Complaints of blurred or impaired vision
- Tingling or numbness in lips and/or tongue
- Rapid heartbeat
- Unconsciousness

# Diabetes Medication ADEs Continued<sup>2</sup>

## Ketoacidosis Related to Insulin Therapy

- Lab results indicating:
  - Profound dehydration
  - Elevated blood glucose
  - Ketones in urine
- Excessive thirst
- Frequent urination
- Nausea/vomiting
- Abdominal pain
- Weakness/fatigue
- Shortness of breath
- Fruity-scented breath
- Confusion
- Rapid respirations
- Elevated temperature

# Diabetes Medication ADE Risk Factors<sup>2</sup>

## Hypoglycemia

- Insulin use
- Sliding scale insulin use
- Oral hypoglycemic medication use
- Decrease in oral intake while taking antidiabetic medication

## Ketoacidosis Related to Insulin Therapy

- Diabetic residents with concurrent illnesses
- Infection
- Diabetic residents with consistently high blood glucose levels
- Episodes of high physical and/or emotional stress or trauma
- A diabetic resident that frequently declines antidiabetic medications or consumes foods not included in diet



# Diabetes Related Interventions<sup>2</sup>

## Hypoglycemia

- Stat administration of Glucagon or IV dextrose
- Administration of orange juice or other high sugar food or fluids in response to blood sugar reading or symptoms
- Transfer to hospital

## Ketoacidosis Related to Insulin Therapy

- Stat order for lab testing including to evaluate blood sugar and fluid and electrolyte status
- Stat order for insulin
- New order for and administration of IV fluids
- Transfer to hospital

## Case #3

69-year-old female states she cannot catch her breath and is excessively thirsty.

- Medications:
  - Insulin glargine 20units HS
  - Glyburide 5mg QAM
  - Simvastatin 20mg QHS

## Case #4

81-year-old male resident wakes in the middle of the night with complaints of nausea and being sweaty.

### Medications:

- Aspirin 81 mg QAM
- Amlodipine 5mg QAM
- Glipizide 10mg BID

# References

1. [https://www.cdc.gov/medicationsafety/adult\\_adversedrugsafety.html](https://www.cdc.gov/medicationsafety/adult_adversedrugsafety.html)
2. <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/Adverse-Drug-Event-Trigger-Tool.pdf>
3. <https://psnet.ahrq.gov/primer/medication-errors-and-adverse-drug-events>

# Contact Information:

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# Objectives Check In!



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**How will this change what you do? Please tell us in the poll...**



## Closing Survey

***Help Us Help You!***



- Please turn your attention to the poll that has popped up in your lower right-hand side of your screen
- Completion of this survey will help us steer our topics to better cater to your needs

# CMS 12<sup>th</sup> SOW Goals



## Behavioral Health Outcomes & Opioid Misuse

- ✓ Promote opioid best practices
- ✓ Decrease high dose opioid prescribing and opioid adverse events in all settings
- ✓ Increase access to behavioral health services



## Patient Safety

- ✓ Reduce risky medication combinations
- ✓ Reduce adverse drug events
- ✓ Reduce C. diff in all settings



## Chronic Disease Self-Management

- ✓ Increase performance on ABCS clinical quality measures (i.e., aspirin use, blood pressure control, cholesterol management, cardiac rehab)
- ✓ Identify patients at high-risk for developing kidney disease & improve outcomes
- ✓ Identify patients at high risk for diabetes-related complications & improve outcomes



## Quality of Care Transitions

- ✓ Convene community coalitions
- ✓ Identify and promote optimal care for super utilizers
- ✓ Reduce community-based adverse drug events

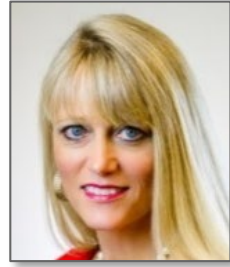


## Nursing Home Quality

- ✓ Improve the mean total quality score
- ✓ Develop national baselines for healthcare related infections in nursing homes
- ✓ Reduce emergency department visits and readmissions of short stay residents



# Making Health Care Better *Together*



Georgia, Kentucky,  
North Carolina and Tennessee  
Leighann Sauls

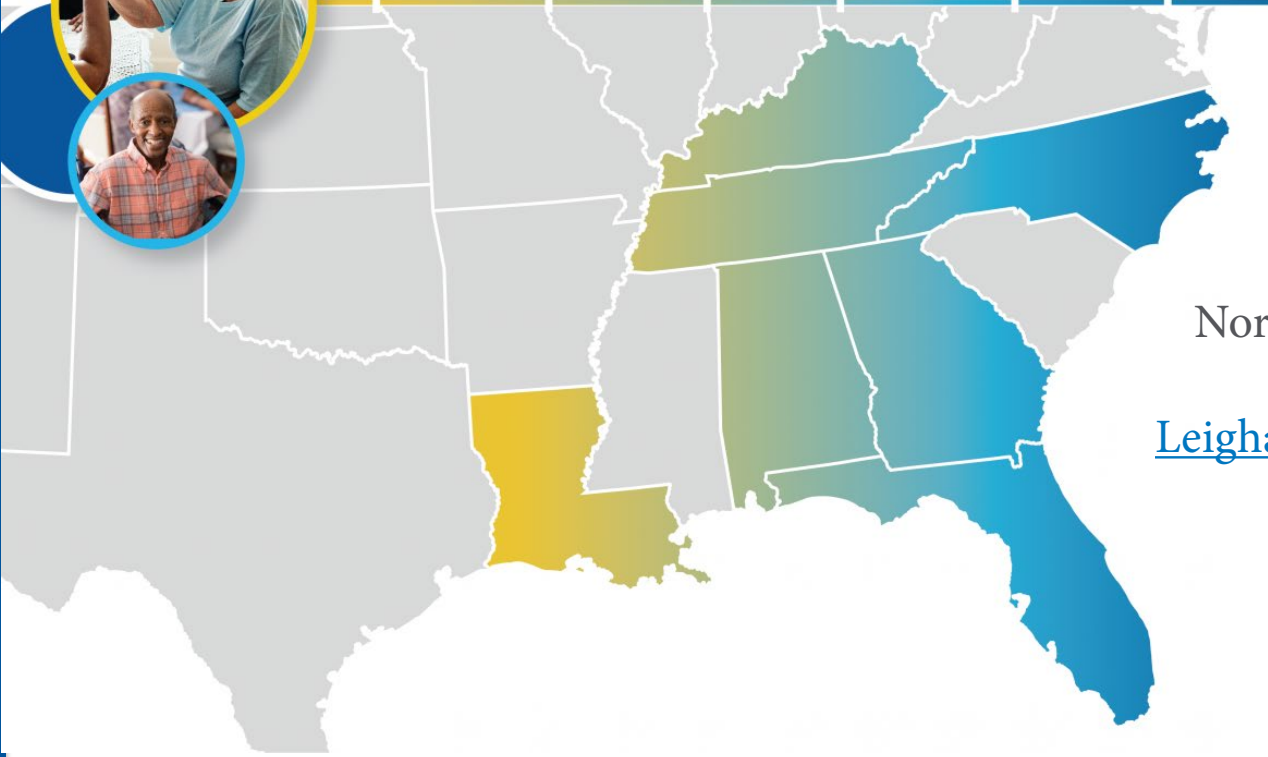
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## Program Directors



# Upcoming Events



## Hospital Quality Improvement Contractor (HQIC)

4<sup>th</sup> Tuesday of the Month  
2-2:30pm ET / 1-1:30pm CT

## Shop Talk

3<sup>rd</sup> Thursday of the Month  
2-3pm ET / 1-2pm CT

May 25, 2021: Antibiograms and Infection Prevention Efforts to Combat Antimicrobial Resistance During COVID-19	June 17, 2021
June 22, 2021: Monoclonal Antibody Therapy for High Risk COVID Patients	July 15, 2021

# Upcoming Events



## Learning and Action Webinars

### Nursing Homes

Tuesdays, 2pm ET/1pm CT

### Community Coalitions

Thursdays, 12:30 pm ET/11:30am CT

June 15, 2021: Developing a Sustainable Water Management Plan in Nursing Homes

May 27, 2021: Powerful Partnerships - Area Offices on Aging & Community Coalitions

July 20, 2021: TBD

June 24, 2021: TBD

# Making Health Care Better Together

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