

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!**



**Quality Improvement
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The Quality Improvement Services Group of
ALLIANT HEALTH SOLUTIONS

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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.



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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.¹

CMS: An injury resulting from drug-related medical interventions.²

Types of ADEs³

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 ADEs²

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 Continued²

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 Factors²

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 Interventions²

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 ADEs²

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 Continued²

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 Factors²

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 Interventions²

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

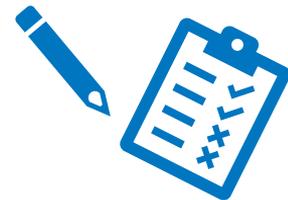
1. https://www.cdc.gov/medicationsafety/adult_adversedrugs_events.html
2. <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/Adverse-Drug-Event-Trigger-Tool.pdf>
3. <https://psnet.ahrq.gov/primer/medication-errors-and-adverse-drug-events>

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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 12th 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*



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Upcoming Events



Hospital Quality Improvement Contractor (HQIC)

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

Shop Talk

3rd 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

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