

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

LEARNING OBJECTIVES & SELF-ASSESSMENT QUESTIONS FOR PLATFORM PRESENTATIONS

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PLATFORM SESSION IA - AMBULATORY CARE

**EFFECT OF THE RENIN-ANGIOTENSIN SYSTEM INHIBITORS ON HEMOGLOBIN LEVELS IN
CHRONIC KIDNEY DISEASE PATIENTS AT A VA MEDICAL CENTER**

Oluchi Juliet Emelogu

Michael E. DeBakey VA Medical Center
Houston, Texas

Learning Objectives:

1. Illustrate the pathogenesis of anemia in chronic kidney disease
2. Compare the effects of ACEi and ARBs on hemoglobin levels
3. Apply these findings to clinical practice

Self-Assessment Questions:

1. Angiotensin-converting enzyme inhibitors (ACEi) and Angiotensin receptor blockers (ARBs) have been proven effective in which of the following conditions:
 - A. Congestive heart failure
 - B. Secondary polycythemia
 - C. Secondary erythrocytosis
 - D. All of the above
2. The renin-angiotensin system has a role at different stages of hematopoiesis. True or False.
 - A. True
 - B. False

Answers:

1. D
2. A

PHARMACIST IMPACT ON TYPE 2 DIABETES MANAGEMENT AT A HOMELESS CLINIC

Esther C. Okoro

JPS Health Network
Fort Worth, TX

Learning Objectives:

1. Describe the socioeconomic implications homelessness can have on diabetes management
2. Evaluate the change in A1C found after clinical pharmacist management in a homeless-based medical home

Self-Assessment Questions:

1. Due to the socioeconomic status of homeless patients', which of the following barriers could negatively impact their diabetes management:
 - A. Environmental stress
 - B. Lack of nutritional needs
 - C. Minimal social support
 - D. A & C
 - E. All of the above
2. T/F. According to previous studies, clinical pharmacists have demonstrated favorable results in achieving glycemic control by means of reduced hemoglobin A1cs in patients with uncontrolled type 2 diabetes.
 - A. True
 - B. False

**PATIENT EXPERIENCE WITH CLINICAL PHARMACIST SERVICES IN
TRAVIS COUNTY FEDERALLY QUALIFIED HEALTH CENTERS**

Jennifer Shin

CommUnityCare Health Centers and University of Texas at Austin College of Pharmacy
Austin, Texas

Learning Objectives:

1. State the role of patient experience surveys
2. Determine the role of clinical pharmacists in the outpatient ambulatory care setting
3. Analyze the patient experience impact of clinical pharmacists in the management of chronic diseases

Self-Assessment Questions:

1. What is the difference between patient experience and patient satisfaction?
 - a. Patient satisfaction is meeting the patient's expectations
 - b. Patient experience is meeting the expectations of a health care encounter
 - c. Both A and B
 - d. Patient satisfaction and experience mean the same thing
2. Pharmacists role in the patient experience include:
 - a. Medication reconciliation
 - b. Medication counseling
 - c. Assessing medication adherence
 - d. All of the above
3. Positive patient experiences are linked to good health outcomes
 - a. True
 - b. False

Answers:

1. C
2. D
3. A

**RISK FACTORS ASSOCIATED WITH FRACTURES IN CHRONIC MOTOR COMPLETE SPINAL CORD
INJURY**

Danni McMahan

VA North Texas Health Care System and Texas Tech University Health Sciences Center
Dallas, TX

Learning Objectives:

1. Compare and contrast the pathophysiology of disuse osteoporosis and age-related osteoporosis.
2. Identify risk factors associated with fractures in chronic motor complete spinal cord injury.

Self-Assessment Questions:

1. Which of the following is a key difference in the pathophysiology of disuse osteoporosis as compared to age-related osteoporosis?
 - A. Increased sclerostin
 - B. Adipogenesis
 - C. Increased osteoclastogenesis
 - D. Increased reactive oxygen species
2. What is the cumulative lifetime fracture rate of individuals with spinal cord injury?
 - A. 10%
 - B. 13%
 - C. 40%
 - D. > 40%

Answers:

1. A
2. D

**EFFECT OF STATIN COMBINATION THERAPY ON PREVENTION OF CARDIOVASCULAR DISEASE
IN HIGH-RISK DIABETIC PATIENTS**

Trang Nguyen

Texas Tech University School of Pharmacy
Dallas, TX

Learning Objectives:

1. To describe the effect of statin combination therapy on prevention of cardiovascular disease in high risk diabetic patients
2. To evaluate the risks versus benefits of statin combination therapy in high risk diabetic patients

Self-Assessment Questions:

1. Which of the following nonstatin cholesterol lowering therapy should be added as first-line to statin according to current guideline for patients with clinical ASCVD, on statin for secondary prevention?
 - a. Ezetimibe
 - b. Fenofibrate
 - c. Niacin
 - d. Bile acid sequestrants
2. Which of the following group of patients has cardiovascular benefits been shown to be effective on cholesterol-lowering combination?
 - a. Triglyceridemia
 - b. HDL less than 30mg/dL
 - c. Atherogenic dyslipidemia
 - d. Diabetic patients with HDL less than 60mg/dL

Answers:

1. A
2. C

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**PLATFORM SESSION IB - HEALTH-SYSTEM PHARMACY
ADMINISTRATION & MANAGEMENT**

IMPACT OF REAL-TIME PRESCRIPTION BENEFIT INFORMATION AT POINT OF DISCHARGE ON A PROVIDER-SPONSORED HEALTH PLAN

Thomas Roduta

Memorial Hermann Memorial City Medical Center
Houston, TX

Learning Objectives:

1. Describe the urgency to focus on cost effective strategies on national health care expenditures for prescription medications
2. Evaluate the impact of prescriber access to pharmacy benefit information on both a provider-sponsored health plan and patient outcomes
3. Investigate the association between formulary compliance and medication adherence

Self-Assessment Questions:

1. Of the \$3.4 trillion spent on national health care expenditures in 2016, what percent was from prescription medications?
 - a. 1%
 - b. 10%
 - c. 50%
 - d. 90%
2. Which of these are physician barriers to prescribing the most cost-effective medications?
 - a. Difficulty in determining patient out-of-pocket costs
 - b. Prescription formularies changing often
 - c. Varying knowledge in specific health care costs
 - d. All of the above

Answers:

1. B. 10%
2. D. All of the above

**LEVERAGING HEALTH SYSTEM PHARMACY OPERATIONS AND DRUG COST SAVINGS TO
SUSTAIN A REMOTE CLINIC**

Andrea A. White
Texas Children's Hospital
Houston, TX

Learning Objectives:

1. To describe the importance of leveraging health system pharmacy operations and drug cost savings to sustain a remote clinic
2. To outline the implementation process for preparation and dispensing of chemotherapy medications for delivery and administration to patients in a remote clinic

Self-Assessment Questions:

1. The procurement cost savings for Pegaspargase with leveraging Texas Children's Hospital pharmacy operations and drug cost savings is approximately \$2500 per dose.
 - a. True
 - b. False
2. If a hospital decides to implement a process to support ordering, verifying, dispensing, and shipping of a chemotherapy drug for a remote clinic, what should happen prior to the process's go live date?
 - a. Ensure the non-chemotherapy trained pharmacists are properly educated on chemotherapy verification
 - b. Ensure the medication preparation area is educated on appropriate preparation and dispensing of the chemotherapy
 - c. Ensure an inventory ordering process is established
 - d. All of the above

Answers:

1. TRUE
2. D

**PROCESS DEVELOPMENT FOR THE EVALUATION OF INTRAVENOUS WORKFLOW
MANAGEMENT SOLUTIONS FOR A LARGE HEALTH SYSTEM**

Daniel L. Rose
Baylor Scott and White Health
Dallas, TX

Learning Objectives:

1. Describe the process developed by Baylor Scott and White Health (BSWH) for the evaluation of intravenous workflow management solutions
2. Identify a process template that could be used for future projects

Self-Assessment Questions:

1. True or False: The ISMP targeted medication safety best practices for hospitals recommends eliminating proxy methods of verification for compounded sterile products (e.g., syringe pull back method) and implementing technology to assist in the verification process.
 - a. True
 - b. False
2. Which of the following process steps were used during the evaluation?
 - a. Team Formation
 - b. Goal Setting
 - c. Request for Information
 - d. All of the Above
3. Which category of questions was NOT included in the request for information submitted to vendors?
 - a. Pharmacy Workflow
 - b. Technology
 - c. Training and Implementation
 - d. Cost and Maintenance

Answers:

1. True
2. D
3. D

EFFECT OF BEST PRACTICE ALERTS (BPA) ON NURSES' INTENTIONS TO PERFORM MEDICATION EDUCATION: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

Pei Jen Lin

Houston Methodist Hospital

University of Houston College of Pharmacy – The Houston Program
Houston, Texas

Learning Objectives:

1. Discuss current inpatient medication education strategies
2. Describe the development of best practice alerts for medication education
3. Characterize the use of the theory of planned behavior to develop medication education solutions

Self-Assessment Questions:

1. According to the theory of planned behavior, which of the following is the most immediate determinant of behavior?
 - a. Attitude
 - b. Intention
 - c. Subjective Norm
 - d. Perceived Behavioral Control
2. Indirect measurements are belief-based measures
 - a. True
 - b. False
3. Which construct is used to evaluate an individual's perceived ease or difficulty of performing a particular behavior?
 - a. Intention
 - b. Attitude
 - c. Perceived Behavioral Control
 - d. Subjective Norm
4. Which of the following measures is used to evaluate an individual's beliefs about the presence of factors that may facilitate or hinder the performance a particular behavior?
 - a. Direct - Attitude
 - b. Indirect – Social Norm
 - c. Indirect - Perceived Behavioral Control
 - d. Direct - Perceived Behavioral Control

Answers:

1. B
2. A
3. C
4. C

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PLATFORM SESSION IIA - CRITICAL CARE

DESMOPRESSIN FOR THE STABILIZATION OF INTRACRANIAL HEMORRHAGE IN PATIENTS ON ANTIPLATELET THERAPY

Kyllie Shae Ryan-Hummel
University Health System
San Antonio, TX

Learning Objectives:

1. Evaluate whether the administration of desmopressin is associated with stabilization of intracranial hemorrhage in patients taking antiplatelet agents
2. Identify the rates of complications associated with desmopressin administration

Self-Assessment Questions:

1. Desmopressin is a well-studied agent known to stabilize intracranial hemorrhages.
 - a. True
 - b. False
2. Desmopressin decreases intracranial hemorrhage size in traumatic and spontaneous bleeds.
 - a. True
 - b. False
3. The use of desmopressin in patients on antiplatelet agents with intracranial hemorrhages occurred in less than 1.5% of patients.
 - a. True
 - b. False

Answers:

1. False
2. False
3. True

EVALUATION OF SEROTONIN RELEASE ASSAY (SRA) AND ENZYME-LINKED IMMUNOSORBENT ASSAY (ELISA) OPTICAL DENSITY TEST IN PATIENTS RECEIVING EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)

Vivek Kataria

Baylor University Medical Center (BUMC), Dallas, TX

Learning Objectives:

1. Differentiate between HIT type I and II
2. Understand the utility of the serotonin release assay and the anti-PFA test
3. Identify the risks and benefits of initiating alternative anticoagulation in a critically ill patient

Self-Assessment Questions:

1. Which of the following characteristics are associated with HIT type II?
 - a. Formation of antibodies that activate platelets following heparin administration
 - b. Thrombin generation leads to thrombus formation and possible thromboembolic events
 - c. Platelet count decreases approximately 30-50%, below 100K
 - d. All of the above
2. Per the Chest guidelines, what optical density threshold requires a confirmatory test
 - a. 0-0.4
 - b. 0.4-1.0
 - c. > 1.0
 - d. None of the above
3. Which of the following are risks of using alternative anticoagulants?
 - a. No reversal agent
 - b. May require renal/hepatic adjustment
 - c. Unpredictable duration of action
 - d. A & B

Answers:

1. D
2. B
3. D

**ASSESSMENT OF THE EFFECTIVENESS OF UTILIZING P2Y12 ASSAYS TO INDIVIDUALIZE
ANTIPLATELET THERAPY IN STROKE PATIENTS**

Sharon Thomas
Methodist Dallas Medical Center
Dallas, Texas

Learning Objectives:

1. Describe the role of antiplatelet therapy in the prevention of stroke.
2. Identify the prevalence of high on-treatment platelet reactivity (HTRP) among stroke patients at Methodist Dallas Medical Center.
3. Compare hospital readmission rates in patients in whom the P2Y12 assay was used to patients in whom the assay was not used.

Self-Assessment Questions:

1. Which of the following agents is FDA approved for secondary stroke prevention?
 - a. Aspirin
 - b. Aspirin/dipyridamole
 - c. Clopidogrel
 - d. All of the above
2. How long should you wait before obtaining a P2Y12 assay after a patient receives a 300 mg loading dose of clopidogrel compared to clopidogrel 75mg daily maintenance regimen?
 - a. 2 hours vs. 8 hours
 - b. 8 hours vs. 12 hours
 - c. 8 hours vs. 7 days
 - d. 12 hours vs. 7 days
3. What was the P2Y12 Reaction Units (PRU) cutoff used in this study to determine high on-treatment platelet reactivity?
 - a. 182
 - b. 208
 - c. 230
 - d. 335

Answers:

1. D
2. C
3. B

**EFFECT OF DEXMEDETOMIDINE VERSUS MIDAZOLAM IN SEPTIC INTENSIVE CARE UNIT
PATIENTS**

Olivia Antosz
Methodist Dallas Medical Center
Dallas, Texas

Learning Objectives:

1. Discuss differences in adverse effects between dexmedetomidine and midazolam as sedative agents.
2. Assess the duration of mechanical ventilation with dexmedetomidine compared to midazolam in septic patients in the medical intensive care unit.

Self-Assessment Questions:

1. Which of the following statements are true according to the current PAD guidelines?
 - a. Use of nonbenzodiazepine sedatives may be preferred over sedation with benzodiazepines.
 - b. Dexmedetomidine is suggested over benzodiazepines for patients with delirium unrelated to withdrawal.
 - c. The CAM-ICU is a valid and reliable monitoring tool for ICU delirium.
 - d. B and C
 - e. All of the above
2. The MIDEX trial showed no difference in time at target sedation (RASS 0 to -3) but did show significantly shorter duration of mechanical ventilation with dexmedetomidine compared to midazolam.
 - a. True
 - b. False
3. What did the results of this study show regarding use of dexmedetomidine vs. midazolam?
 - a. There was no statistical difference between groups in duration of mechanical ventilation.
 - b. Vasopressor duration was significantly lower in the dexmedetomidine group.
 - c. There was a higher drug cost associated with midazolam.
 - d. Delirium was significantly higher in the midazolam group.

Answers:

1. E.
2. A.
3. A.

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**PLATFORM SESSION IIB - MEDICATION-USE SAFETY, PHARMACY
SYSTEMS & OPERATIONS**

**EVALUATING THE IMPACT OF A SYSTEMATIC APPROACH TO OPTIMIZING MEDICATION
ALERTS IN A HEALTH-SYSTEM**

Sunny B. Bhakta
Houston Methodist Hospital, Houston, TX

Learning Objectives:

1. At the conclusion of this presentation, participants should be able to identify the need for optimization of clinical decision support and alert systems within a health-system
2. At the conclusion of this presentation, participants should be able to evaluate algorithmic approaches to optimizing alert types and rates
3. At the conclusion of this presentation, participants should be able to Identify critical success factors to optimizing medication alerts

Self-Assessment Questions:

QUESTION 1

True or False: Clinical decision support only entails interruptive pop-up alerts.

- TRUE
- FALSE

QUESTION 2

Alert Optimization may include which of the following strategies?

- A) Prioritizing alerts based on severity and clinical relevance
- B) Customizing commercially available systems
- C) Learning from previously overridden alerts to avoid future alerting
- D) All of the above

**EFFECT OF THERAPEUTIC INTERCHANGE ON MEDICATION CHANGES BETWEEN ADMISSION
AND DISCHARGE**

Ryan A. Popp
University of the Incarnate Word Feik School of Pharmacy
San Antonio, TX

Learning Objectives:

1. Discuss the potential risks and benefits of therapeutic interchange policies within the inpatient setting
2. Detail research methods for measuring the effect of therapeutic interchange on medication changes and patient outcomes post-discharge

Self-Assessment Questions:

1. Therapeutic interchange:
 - a. Generally has no effect on inpatient medication costs
 - b. Is under-utilized in Texas due to regulations
 - c. May result in unintentional adverse effects
 - d. Often complicates hospital formularies
2. When reconciling a patient's discharge medications with the home medications, which of the following is NOT considered a medication change?
 - a. olanzapine 5 mg 1 tablet PO daily → olanzapine 5 mg 1 ODT tablet PO daily
 - b. atorvastatin 80 mg 1 tablet PO daily → rosuvastatin 40 mg 1 tablet PO daily
 - c. lisinopril 20 mg 1 tablet PO daily → lisinopril 40 mg 1 tablet PO daily
 - d. Nexium 40 mg 1 tablet PO daily → esomeprazole 40 mg 1 tablet PO daily

Answers:

1. C
2. D

EFFECTIVE DIABETES MANAGEMENT IN HEART TRANSPLANTATION

Steffany Nguyen

Memorial Hermann-Texas Medical Center
Houston, TX

Learning Objectives:

1. Discuss the prevalence of post-transplant diabetes mellitus (PTDM) and related consequences in heart transplantation.
2. Analyze current success rates of an established pharmacist-run outpatient clinic in achieving diabetes control in the post-transplant patient population and investigate physician barriers towards patient referral
3. Evaluate quality improvement methods implemented to increase patient referral and the utilization of pharmacist-run diabetes management services for the pre-and post-heart transplant patient population

Self-Assessment Questions:

1. What are the consequences of delayed or inadequate management of uncontrolled diabetes post-heart transplantation?
 - a. Hemodynamic compromise
 - b. Graft rejection
 - c. Cardiac allograft vasculopathy
 - d. All of the above
2. The Memorial Hermann-Texas Medical Center Medication Therapy and Wellness Clinic (MTWC) currently manages patients who have received all types of solid organ transplants.
 - a. True
 - b. False

Answers:

1. All of the above
2. False

APPROPRIATE DIAGNOSTIC EVALUATION AND DOCUMENTATION OF HEPARIN-INDUCED THROMBOCYTOPENIA IN ADULT PATIENTS

Thomas W. Szymanski

Memorial Hermann – Texas Medical Center
Houston, TX

Learning Objectives:

1. Describe the appropriate diagnostic approach to patients with suspected HIT
2. Examine the current approach to documentation and diagnosis of HIT at Memorial Hermann – Texas Medical Center
3. Assess the effects of real-time monitoring of ELISA results on documentation and heparin allergies

Self-Assessment Questions:

1. Which of the following is NOT used in the diagnosis of heparin-induced thrombocytopenia?
 - a) Serotonin release assay
 - b) Enzyme-linked immunoassay
 - c) Direct antiglobulin test
 - d) 4T score
2. Which of the following is a potential result of inappropriate heparin allergy documentation?
 - a) Increased direct thrombin inhibitor use
 - b) Failure to thrive
 - c) Increased mortality
 - d) Decreased patient satisfaction

Answers:

1. C
2. A

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PLATFORM SESSION IIIA - INFECTIOUS DISEASES/HIV

**OUTCOMES OF NON-AMPICILLIN THERAPY IN ENTEROCOCCAL INFECTIONS: A
RETROSPECTIVE CHART REVIEW IN A COMMUNITY HOSPITAL**

Boxin Xu

Memorial Hermann Memorial City Medical Center
Houston, TX

Learning Objectives:

1. Identify different enterococcal mechanisms of resistance
2. Identify current antibiotics used to treat enterococcal infections
3. Evaluate appropriateness of non-ampicillin and ampicillin based therapy for enterococcal infections

Self-Assessment Questions:

1. What is the drug of choice for *Enterococcus faecalis* infections?
 - a. Vancomycin
 - b. Ampicillin
 - c. Piperacillin-Tazobactam
 - d. Meropenem
2. Which of the following resistance mechanisms can cause antimicrobial resistance in *Enterococcus spp.*?
 - a. modification of drug targets
 - b. inactivation of the antimicrobial
 - c. overexpression of efflux pumps
 - d. All of the above
3. Which of the following antimicrobial(s) are not commonly listed in the culture and sensitivity report?
 - a. Vancomycin
 - b. Piperacillin-Tazobactam
 - c. Meropenem
 - d. B and C

Answer key:

1. B
2. D
3. D

EVALUATION OF ANTIBIOTIC DURATION IN AN EMERGENCY DEPARTMENT PRIOR TO AND POST-IMPLEMENTATION OF A FORMAL AUDIT-AND-FEEDBACK PROGRAM

Adaku Onwubuya

Texas Tech University Health Sciences Center School of Pharmacy
Abilene, TX

Learning Objectives:

1. Identify inappropriate duration of antibiotics based on guideline recommendations
2. Construct an antimicrobial stewardship program with a focus on antibiotic duration
3. Modify antibiotic duration in an emergency department setting

Self-Assessment Questions:

1. What is the desired goal for limiting antimicrobial duration? (Select all that apply)
 - a. Increased antimicrobial resistance
 - b. Decreased efficacy
 - c. Decreased adverse effects
 - d. Reducing costs
2. What is the recommended duration of antibiotics in patients with acute COPD exacerbations based on the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines?
 - a. 10-14 days
 - b. 7-10 days
 - c. 5-7 days
 - d. Antibiotics not indicated
3. How can antimicrobial stewardship pharmacists help reduce the duration of antibiotics prescribed in the ED?
 - a. Educate practitioners on guideline-recommended antibiotic durations
 - b. Perform regular audits on antibiotic utilization
 - c. Provide feedback to practitioners
 - d. All of the above

Answers:

1. C
2. C
3. D

IMPACT OF A PHARMACIST DRIVEN PROTOCOL AUTOMATICALLY SUBSTITUTING NAFICILLIN TO CEFAZOLIN IN METHICILLIN-SENSITIVE STAPHYLOCOCCUS AUREUS INFECTIONS

Natalie Martinez

Texas Health Presbyterian Hospital Dallas
Dallas, TX

Learning Objectives:

1. Review literature pertaining to outcomes related to cefazolin in methicillin-sensitive Staphylococcus aureus infections
2. Assess potential advantages and disadvantages of using cefazolin in methicillin-sensitive Staphylococcus aureus infections
3. Analyze the impact that a pharmacist driven protocol of automatically substituting nafcillin to cefazolin had on patient outcomes and cost-effectiveness

Self-Assessment Questions:

1. In what indication is nafcillin preferred over cefazolin?
 - a. Bacteremia
 - b. Cellulitis
 - c. Meningitis
 - d. Osteomyelitis
2. Which of the following is a potential advantage of cefazolin compared to nafcillin?
 - a. The drug cost of cefazolin is much lower than nafcillin
 - b. There is less incidence of interstitial nephritis with cefazolin
 - c. The dosing regimen is easier to administer as it is less frequent
 - d. All of the above

Answers:

1. C
2. D

EFFECT OF PHARMACIST-DRIVEN MOLECULAR DIAGNOSTIC ALERTS ON CLINICAL OUTCOMES

Ben Dagraedt

Texas Tech University Health Science Center
Lubbock, TX

Learning Objectives:

1. Describe how to interpret and apply molecular diagnostic test results to patient care.
2. Evaluate the effects of a pharmacist-driven molecular diagnostic alerts on clinical outcomes.

Self-Assessment Questions:

1. What type of clinical decisions can be made with the help of molecular diagnostics?
 - a. De-escalate therapy based on the absence of resistance markers
 - b. Escalate therapy based on the presence of resistance markers
 - c. Identify likely contaminants based on other clinical information
 - d. All of the above
2. What makes pharmacists key players in interpreting molecular diagnostic results and making interventions on these results?
 - a. The ability for an alert to fire directly to their order queue upon the completion of PCR results
 - b. Their role in the drug delivery process to ensure timely administration of correct antibiotics
 - c. Pharmacists direct role in managing and monitoring antimicrobials at all hours
 - d. With training, pharmacists have the skills and knowledge to tailor antimicrobial selection based on the clinical picture of each patient and PCR results
 - e. All of the above

Answers:

1-d

2-e

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PLATFORM SESSION IIIB - INFECTIOUS DISEASES/HIV

**ASSESSMENT OF SAFETY AND EFFICACY POST SWITCH TO NEWER GENERATION HIV
ANTIRETROVIRALS**

Tim Burns

Texas Tech University School of Pharmacy
Dallas, Texas

Learning Objectives:

1. Identify newer HIV antiretroviral therapies
2. Determine benefits related to switching from older therapies

Self-Assessment Questions:

1. What is (are) potential advantages of switching tenofovir to the alafenamide formulation include?
 - a. Improved efficacy
 - b. Long term renal benefits
 - c. Improved lipid profile
 - d. Less drug interactions

Answer: b

2. What are potential advantages of switching to dolutegravir?
 - a. Few drug interactions
 - b. Lack of renal adjustments
 - c. Once daily dosing
 - d. NRTI-sparing combination regimen available

Answer: a,b,c,d

**EVALUATING INCIDENCE, SEVERITY, AND RISK FACTORS OF RECURRENT CLOSTRIDIUM
DIFFICILE AT MDMC**

Natalie Weltman

Methodist Dallas Medical Center
Dallas, TX

Learning Objectives:

1. Analyze risk factors associated with recurrent CDI at MDMC
2. Identify incidence rate of CDI and recurrent CDI at MDMC
3. Classify severity of CDI

Self-Assessment Questions:

1. How is *Clostridium difficile* transmitted?
 - a. Airborne
 - b. Droplet
 - c. Contact
 - d. Vector borne
2. For a *Clostridium difficile* infection (initial episode) to be classified as a severe infection, which of the following criteria may be present?
 - I. Admission to ICU due to CDI
 - II. Leukocytosis (15,000 cells/microliter)
 - III. Increasing SCr (1.5x baseline)
 - a. I only
 - b. II and III
 - c. I, II, III
 - d. III only

Answers:

1. C
2. B

SAFETY AND EFFICACY OF THE CONCOMITANT USE OF DIRECT ORAL ANTICOAGULANTS (DOACs) WITH POTENTIALLY INTERACTING ANTIRETROVIRALS AND DIRECT-ACTING ANTIVIRALS.

Parisa Khan

Veterans Affairs North Texas Health Care System
Dallas, TX

Learning Objectives:

1. Describe underlying etiology of increased thrombotic risk in HIV and Hepatitis C-infected patients.
2. Identify classes of antiretrovirals and direct-acting antivirals most likely to interact with direct acting anticoagulants.
3. Compare safety and efficacy outcomes for patients receiving warfarin vs. DOACs in patients receiving concomitant interacting antiretrovirals or direct-acting antivirals.

Self-Assessment Questions:

1. Which of the following classes of antiretrovirals have the highest potential for drug-drug interactions?
 - a. Protease Inhibitors
 - b. Nucleoside Reverse Transcriptase Inhibitors
 - c. Non-Nucleoside Reverse Transcriptase Inhibitors
 - d. NS5B Polymerase Inhibitors
2. Therapeutic INR levels were documented at greater than 50% of anticoagulation visits for patients in the warfarin arm.
 - a. True
 - b. False
3. The majority of patients in the DOAC group received which of the following class(es) of medications?
 - a. Non-nucleoside reverse transcriptase inhibitors
 - b. Nucleoside reverse transcriptase inhibitors
 - c. NS3/4A Protease Inhibitors
 - d. CC5R receptor antagonists

Answers:

1. A Protease Inhibitors
2. B False
3. C NS3/4A Protease Inhibitors

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PLATFORM SESSION IVA - INTERNAL MEDICINE/PHARMACOTHERAPY

**IMPACT OF EDUCATIONAL INTERVENTION ON ENOXAPARIN THROMBOPROPHYLAXIS DOSING
IN MORBIDLY OBESE PATIENTS IN A COMPREHENSIVE CANCER CENTER**

Chelsea Wong

The University of Texas MD Anderson Cancer Center
Houston, TX

Learning Objectives:

1. To outline enoxaparin thromboprophylaxis in morbidly obese patients
2. To describe the change in appropriate enoxaparin dosing in morbidly obese patients pre- and post-educational intervention

Self-Assessment Questions:

1. Which of the following is/are appropriate for enoxaparin thromboprophylaxis dosing in morbidly obese patients?
 - a. 40 mg subcutaneous daily
 - b. 30 mg subcutaneous daily
 - c. 40 mg subcutaneous every 12 hours
 - d. 0.5 mg/kg/day subcutaneously
 - e. c and d
2. Verbal and written educational interventions are effective in improving the number of appropriate enoxaparin thromboprophylaxis doses in morbidly obese patients
 - a. True
 - b. False

Answers:

1. e
2. a

FACTORS INFLUENCING PROVIDER AND PATIENT CHOICE OF P2Y₁₂ INHIBITOR THERAPY

Dr. Rebekah Benitez

University of the Incarnate Word Feik School of Pharmacy
San Antonio, Texas

Learning Objectives:

1. Summarize guideline recommendations and recent evidence regarding P2Y₁₂ inhibitor therapy following cardiac stent placement or acute coronary syndromes.
2. Identify medication-specific factors that may influence cardiology provider and patient preference for each P2Y₁₂ inhibitor.
3. Evaluate how medication-specific factors that influence preference of P2Y₁₂ inhibitor therapy differ between cardiology providers and patients.

Self-Assessment Questions:

1. Which of the following is true regarding ticagrelor?
 - a. Evidence has shown superior efficacy compared to clopidogrel for certain patients
 - b. Evidence has shown reduced rates of dyspnea compared to clopidogrel
 - c. Evidence has shown an increased risk of drug-drug interactions compared to clopidogrel
2. Which of the following factors is an advantage of clopidogrel that might influence selection?
 - a. Twice daily administration
 - b. Lowest cost
 - c. Lack of evidence for mortality reduction
3. True or false: When asked to rank factors in order of importance, the ranking of medication cost was significantly different between cardiology-providers and patients
 - a. True
 - b. False

Answers:

1. A: Evidence has shown improved efficacy compared to clopidogrel for certain patients
2. B: Lowest cost
3. A: True

USE OF DIRECT-ACTING ORAL ANTICOAGULANTS FOR LEFT VENTRICULAR THROMBUS

Stephanie Elagizi
Ochsner Medical Center
New Orleans, LA

Learning Objectives:

1. Describe the rationale supporting the use of direct oral anticoagulants in patients with left ventricular thrombus.
2. Compare the efficacy related to thrombus resolution of direct oral anticoagulants versus warfarin in patients with left ventricular thrombus.
3. Compare the outcomes related to bleeding and thrombosis of direct oral anticoagulants versus warfarin in patients with left ventricular thrombus.

Self-Assessment Questions:

1. Currently the American College of Cardiology/American Heart Association recommend warfarin for at least 3 months in patients with left ventricular thrombus post-STEMI.
 - a) True
 - b) False
2. The rationale for studying direct acting oral anticoagulants (DOACs) for left ventricular (LV) thrombus include:
 - a) Recommendations for the use of warfarin for LV thrombus is based on observation data and not robust studies.
 - b) DOACs were shown to be superior to warfarin for the treatment of LV thrombus in a small randomized study.
 - c) Information for the use of DOACs for the treatment of LV thrombus are limited to case reports.
 - d) A and C
3. The following statement(s) are true:
 - a) Left ventricular thrombus is a potential complication following myocardial infarction.
 - b) The incidence of left ventricular thrombus is currently higher compared to the pre-reperfusion era.
 - c) Embolization is one of the most feared risks of left ventricular thrombus.
 - d) A and C
 - e) All of the above

Answers:

1. Answer a
2. Answer d
3. Answer d

RELATIONSHIP OF MAJOR BLEEDING AND INTERACTION BETWEEN DIRECT ORAL ANTICOAGULANTS AND MAJOR CYP3A4 OR P-GP INHIBITORS: RETROSPECTIVE CHART REVIEW

Sana Qureshi
Scott & White Medical Center
Temple, TX

Learning Objectives:

1. List the most commonly prescribed strong CYP3A4 and/or P-gp inhibitors with direct-oral anticoagulants (DOACs) in patients presenting to the hospital with major bleeding.
2. Identify the most common type of major bleeding event in patients with drug-drug interactions between DOACs and strong CYP3A4 and/or P-gp inhibitors.
3. Describe the mechanism of interactions of CYP3A4 and/or P-gp inhibitors with DOACs.

Self-Assessment Questions:

1. Which of the following choices accurately describes the interaction between major CYP3A4 or P-gp inhibitors and direct oral anticoagulants (DOACs)?
 - a. CYP3A4 inhibitors impair DOAC metabolism
 - b. CYP3A4 inhibitors induce DOAC metabolism
 - c. P-gp inhibitors promote DOAC metabolism
 - d. P-gp inhibitors promote DOAC efflux out of cells
2. Based off the results, the most common type of major bleed was gastrointestinal bleeding.
 - a. True
 - b. False

Answers:

1. A
2. A

EFFECT OF NON-SELECTIVE BETA-BLOCKERS ON MORTALITY IN PATIENTS WITH END-STAGE CIRRHOISIS

Jenna Snoga

University of the Incarnate Word Feik School of Pharmacy
San Antonio, Texas

Learning Objectives:

1. Describe rationale for use of non-selective beta-blockers in patients with cirrhosis.
2. Summarize guideline recommendations and recent evidence for the use of non-selective beta-blockers in patients with cirrhosis.
3. Evaluate the effect of non-selective beta-blocker use on mortality in patients with end-stage cirrhosis.

Self-Assessment Questions:

1. Which statement is correct regarding use of non-selective beta-blockers (NSBBs) in patients with cirrhosis?
 - a. NSBBs increase portal pressure by increasing portal venous inflow via β_1 and β_2 blockade
 - b. NSBBs may be used for primary and secondary prevention of variceal bleeding
 - c. Propranolol and metoprolol are two NSBBs recommended for prevention of variceal bleeding
 - d. None of the above
2. Which of the following patients with cirrhosis is NOT a candidate for non-selective beta-blocker therapy?
 - a. A patient without the presence of varices
 - b. A patient with small varices and presence of red wale marks, but no history of bleeding
 - c. A patient with large varices, but no history of bleeding
 - d. A patient with a history of an acute variceal bleed
3. True/False: Based on the results of this study, non-selective beta-blockers in patients with end-stage cirrhosis were associated with an increase in mortality.
 - a. True
 - b. False

Answers:

1. B
2. A
3. B

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION VA - TRANSITIONS OF CARE & PHARMACY
INFORMATICS**

DEVELOPMENT AND IMPLEMENTATION OF A PHARMACIST-LED MEDICATION ACCESS PRE-SCREENING PROGRAM

Alyssa Kmet
Methodist Dallas Medical Center
Dallas, TX

Learning Objectives:

1. Identify methods to improve medication access through pharmacist involvement in transitions of care.
2. Outline the process for developing and implementing a pharmacist-led medication access pre-screening program.
3. Describe the pharmacist's impact on improving medication access and enhancing care transitions through a medication access pre-screening program.

Self-Assessment Questions:

1. Pharmacists can play an active role in transitions of care through which of the following activities?
 - a. Medication and disease education
 - b. Medication access assistance
 - c. Medication bedside delivery
 - d. All of the above
2. Which of the following is a consequence of ineffective care transitions?
 - a. Adverse outcomes
 - b. Decreased satisfaction
 - c. Financial penalties
 - d. All of the above
3. Increased access to medications by lowering medication costs has the potential to improve medication adherence.
 - a. True
 - b. False

Answers:

1. D
2. D
3. A

IMPACT OF A PHARMACIST LED DIABETES DISCHARGE COUNSELING PROGRAM

Justin R. Pedigo

Texas Tech University Health Sciences Center School of Pharmacy
Lubbock, TX

Learning Objectives:

1. Describe the pharmacist's role in reducing hospital readmissions
2. Describe the policy and procedures of the pharmacist led diabetes discharge program
3. Summarize the results of a pharmacist led diabetic discharge program

Self-Assessment Questions:

1. What are some ways a pharmacist can help to improve patient care and potentially decrease hospital utilization by patients with diabetes?
 - a. Review of discharge medication reconciliation to determine accuracy and appropriateness of therapies
 - b. Educate the patient on about their disease state, medications, and discharge plan
 - c. Follow-up with the patient via telephone after discharge
 - d. All of the above

Answer: D

2. In patients with diabetes who are hospitalized which of the following are true
 - a. Patients with diabetes generally have a shorter length of stay in the hospital than patients without diabetes
 - b. Patients with diabetes generally have less complications in the hospital than patients without diabetes
 - c. Patients with diabetes have a higher rate of mortality in the hospital than patients without diabetes
 - d. All of the above

Answer: C

**IMPACT OF A PHARMACY-LED MEDICATION HISTORY PROGRAM IN THE EMERGENCY CENTER
OF A LARGE, ACADEMIC HOSPITAL**

Cindy Adibe
Harris Health System
Houston, TX

Learning Objectives:

1. Describe the importance of accurate medication histories in the continuum of care
2. Outline the concept of leveraging pharmacist extenders to complete medication histories at an institution
3. Analyze the outcomes of a pharmacy-led medication history program piloted in the emergency department of a large, academic hospital

Self-Assessment Questions:

1. Medication history is the act of interviewing and comparing a patient's medication list against the physician's admission, transfer, and/or discharge orders, with the goal of providing correct medications to the patient at all transition points within the hospital.
 - a. True
 - b. False
2. What responsibilities can pharmacists and pharmacy extenders own within the transitions of care process?
 - a. Admission medication histories
 - b. Discharge counseling
 - c. Follow-up phone calls
 - d. All of the above
3. At the completion of the pilot, what was the most common discrepancy identified in the medication histories completed by the pharmacy students?
 - a. Discontinued/not taking drug
 - b. Duplication of therapy
 - c. Incorrect/missing drug
 - d. Incorrect/missing dose

Answers:

1. B
2. D
3. A

**ANESTHESIOLOGIST ELECTRONIC DOCUMENTATION PATTERNS BEFORE AND AFTER
IMPLEMENTATION OF A SOPHISTICATED COMPUTERIZED PHYSICIAN ORDER ENTRY
CONFIGURATION**

Madison Murphy

INTEGRIS Baptist Medical Center
Oklahoma City, OK

Learning Objectives:

1. To identify the FDA-approved medications used in the reversal of non-depolarizing neuromuscular blockade after surgery and their relative efficacy.
2. To compare the documentation patterns before and after the implementation of a computerized order entry configuration for anesthesiologist ordering of sugammadex.
3. To advocate for the implementation of advanced computerized order entry strategies to improve compliance with approved sugammadex usage criteria, medication charting, and documentation of usage rational.

Self-Assessment Questions:

1. Which of the following agents is not FDA-approved for the reversal of non-depolarizing neuromuscular blockade?
 - a. Neostigmine
 - b. Physostigmine
 - c. Sugammadex
 - d. Edrophonium
2. Implementation of a computerized order entry configuration for sugammadex resulted in an improvement in documentation and a decrease in cost for the health system due to compliance with the approved usage criteria.
 - a. True
 - b. False
3. If a health system implements a computerized order entry configuration, what is a potential benefit that could occur after implementation?
 - a. Improvement in communication between physicians and pharmacists
 - b. Elimination of surveillance of the configuration after go-live
 - c. Reduction in the rate of medication errors
 - d. A and C

Answers:

1. B
2. B
3. D

**EVALUATING THE IMPACT OF PHARMACY DRIVEN INTERVENTIONS ON PATIENTS WITH
HYPERGLYCEMIA WHO HAVE BEEN IDENTIFIED BY USE OF A CLINICAL SURVEILLANCE
SOFTWARE SYSTEM**

Michael Wisner

Norman Regional Health System
Norman, OK

Learning Objectives:

1. To identify the benefits and limitations associated with the use of a clinical surveillance software system.
2. To describe the barriers related to implementing and measuring outcomes related to a pharmacist driven glycemic management program.

Self-Assessment Questions:

1. CMS currently enforces two quality measures, NQF 2362 and NQR 2363, for measuring inpatient glycemic control.
 - a. True
 - b. False
2. Which of the following are potential barriers to implementing a pharmacist driven glycemic management program?
 - a. Time necessary for patient case review
 - b. Difficulty finding relevant data points at the right time and place
 - c. Buy-in from other healthcare providers
 - d. All of the above

Answers:

1. b. False
2. d. All of the above

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION VIA - EMERGENCY MEDICINE

PYRIDOSTIGMINE BROMIDE 30MG STABILITY IN EXTENDED STORAGE CONDITIONS

Maj Joanna Heskett

San Antonio Military Medical Center

San Antonio, TX

Learning Objectives:

1. Explain pharmacology of pyridostigmine as nerve gas prophylaxis
2. Outline drug stability testing guidance and procedures

Self-Assessment Questions:

1. The mechanism of action of pyridostigmine can be characterized as:
 - a) An irreversible acetylcholinesterase inducer
 - b) A reversible acetylcholinesterase inducer
 - c) A reversible acetylcholinesterase inhibitor
 - d) An irreversible acetylcholinesterase inhibitor

Answer: c

2. In the military combat troop, pyridostigmine 30mg is indicated for:
 - a) Treatment at the first sign of nerve agent poisoning
 - b) Treatment at the first sign of pancuronium overdose
 - c) Pretreatment against the lethal effects of Soman nerve agent poisoning
 - d) Pretreatment against atropine overdose

Answer: c

4. International Council on Harmonisation's Quality Guidance Documents define "stability" as the assay retention of how many percent of the label claim:
 - a) 90%
 - b) 95%
 - c) 90-110%
 - d) 95-105%

Answer: d

**ASSESSMENT OF DIVIDED-LOAD VANCOMYCIN DOSING VERSUS TRADITIONAL VANCOMYCIN
DOSING IN THE OBESE POPULATION**

Erica Helen Rath

CHRISTUS Mother Frances Hospital- Tyler
Tyler, TX

Learning Objectives:

1. Explain the importance of appropriate vancomycin loading doses
2. Investigate a non-traditional vancomycin loading dose strategy
3. Challenge traditional dosing strategies and implement new strategies to achieve optimal vancomycin levels

Self-Assessment Questions:

1. What is the current guideline recommendation for weight based vancomycin loading doses?
 - a. 10 – 20 mg/kg ideal body weight
 - b. 25 – 30 mg/kg actual body weight
 - c. 25 – 30 mg/kg ideal body weight
 - d. 20 mg/kg actual body weight
2. Capping vancomycin loading doses at 2000 mg can be suboptimal for infections that are located in tissues that are difficult to penetrate.
 - a. True
 - b. False
3. Giving 1000 mg IV Q6H for 5 doses was related to higher incidence of nephrotoxicity when compared to traditional 2000 mg IV loading doses.
 - a. True
 - b. False

Answers:

1. B
2. True
3. False

EVALUATION OF READMISSION RATES AND POTENTIAL COST SAVINGS IMPACT WITH THE USE OF ORITAVANCIN IN CELLULITIS PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT

Amrita Das
Texas Health Harris Methodist
Fort Worth, TX

Learning Objectives:

1. Determine factors needed to consider in order to determine whether oritavancin is a viable cellulitis therapy option to use in the emergency department setting based on the data gathered from Harris Methodist Oritavancin pilot study

Self-Assessment Questions:

1. What type of organisms does oritavancin treat?
 - a. Gram positive infections
 - b. Gram negative infections
 - c. Only MRSA
 - d. Anaerobes only
2. Oritavancin was shown to be superior to vancomycin for the treatment of acute bacterial skin and skin structure infections (ABSSSIs) based on the SOFO I and II trials.
 - a. True
 - b. False
3. Which of the following is not an inclusion criteria for oritavancin per protocol?
 - a. Homeless
 - b. Oral antibiotic failure outpatient
 - c. Dementia
 - d. Diabetic foot infection

Answers

1. A
2. B
3. D

**CLINICAL OUTCOMES ASSOCIATED WITH THE USE OF MEASURED WEIGHTS IN PATIENTS
RECEIVING THROMBOLYSIS FOR ACUTE ISCHEMIC STROKE**

Alexander C. Joachim
Memorial Hermann Southwest Hospital
Houston, TX

Learning Objectives:

1. Identify risk factors for bleeding and patients who may have a predisposition for intracranial hemorrhage
2. Identify the risks associated with the use of estimated patient weights in dosing recombinant tissue plasminogen activator
3. Assess whether the implementation of measuring patient weights in the emergency department at your hospital would improve clinical outcomes

Self-Assessment Questions:

1. True or false, every patient administered rtPA has their weight measured prior to administration?
 - A. True
 - B. False
2. Which of the following is not a consideration when treating a patient with rtPA?
 - A. Door-to-Needle Times
 - B. Performing an ultrasound
 - C. Obtaining patient weight
 - D. Performing a CT scan

Answers:

1. A
2. B

**EVALUATION OF WEIGHT-STRATIFIED ADENOSINE DOSING FOR PATIENTS WITH
SUPRAVENTRICULAR TACHYCARDIA**

Sharmin Amjad
University Hospital, UT Health San Antonio, UT Austin College of Pharmacy, University of the Incarnate Word Feik
School of Pharmacy
San Antonio, Texas

Learning Objectives:

1. Identify guideline-based dosing recommendations for adenosine in supraventricular tachycardia (SVT)
2. Evaluate literature exploring weight-stratified dosing of adenosine in SVT in adult patients
3. Describe the efficacy and adverse effects of using greater than recommend doses of adenosine in obese patients

Self-Assessment Questions:

1. Half-life of adenosine is very short (less than 10 seconds).
 - a. True
 - b. False
2. Hypotension may be seen with the use of adenosine due to which mechanism of action:
 - a. Vasodilatory
 - b. Vasoconstriction
 - c. Decreased cAMP

Answers:

1. True
2. a

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION VIIA - AMBULATORY CARE

**IMPACT OF SERVICE LEARNING ACTIVITIES ON PREPAREDNESS FOR THIRD YEAR
INTRODUCTORY PATIENT CARE SKILLS ROTATIONS**

Mary R. Shreffler

Texas Tech University School of Pharmacy
Amarillo, TX

Learning Objectives:

1. Define service learning and its role in pharmacy curricula per the American Association of Colleges of Pharmacy.
2. Summarize how students benefit from service learning.
3. Outline the potential benefits of service learning on preparedness for patient care rotations.

Self-Assessment Questions:

1. Which of the following activities best describes service learning?
 - a. Interdisciplinary rounding at a hospital
 - b. Holding a leadership position in a local pharmacy organization
 - c. Participating at a local health fair for the indigent.
 - d. Reviewing a journal article for a pharmacy journal.
2. Which of the following is NOT a component of service learning according to American Association of Colleges of Pharmacy?
 - a. Dedicated reflection time of the service learning event.
 - b. Replaces population-based and public health lectures.
 - c. Meets the needs of an underserved population in the community.
 - d. Supports information presented in didactic lectures.
3. Which of the following are previously reported benefits of service learning?
 - a. Improve communication skills
 - b. Strengthen student knowledge of disease states
 - c. Identify complexities in the health care.
 - d. All of the above.

Answers

1. C
2. B
3. D

METFORMIN MISSED OPPORTUNITIES

Sarah Fry

Central Texas Veterans Health Care System
Temple, Texas

Learning Objectives:

1. describe the mechanism of action of the biguanide medication metformin
2. identify appropriate patients for metformin therapy
3. evaluate the impact of the addition of metformin to the therapy regimen of patients with type 2 diabetes mellitus

Self-Assessment Questions:

1. What is the approximate A1c lowering potential of metformin?
 - a. 0-0.5%
 - b. 1-1.5%
 - c. 2-2.5%
 - d. 2.5-3%
2. T/F: Metformin cannot be continued in a patient if their eGRF fall below 45 mL/min.
3. The target total daily dose of metformin is _____.

Answers:

1. B
2. F
3. 2000 mg or 2 g

EVALUATION OF ANTICOAGULATION PRESCRIBING PREFERENCES AMONG MIDLEVEL PRACTITIONERS AND PHYSICIANS IN LOUISIANA

Hannah N. Naquin

Xavier University of Louisiana College of Pharmacy
New Orleans, LA

Learning Objectives:

1. explain the anticoagulation prescribing preferences among providers in Louisiana
2. determine their consistency with current guidelines
3. define providers' rationale for their preferences

Self-Assessment Questions:

1. Assuming no pertinent medical history, according to the CHEST Guidelines, which agent/drug class is preferred for venous thromboembolism in a non-cancer patient?
 - a. Warfarin
 - b. A direct oral anticoagulant (apixaban, rivaroxaban, edoxaban, dabigatran)
 - c. Aspirin
 - d. Clopidogrel
2. According to the CHEST Guidelines, which anticoagulant is preferred in a patient with severe renal impairment?
 - a. Apixaban
 - b. Rivaroxaban
 - c. Dabigatran
 - d. Warfarin

Answers:

1. B
2. D

**SCREENING AND PRESCRIBING PATTERNS OF ACE INHIBITORS OR ANGIOTENSIN RECEPTOR
BLOCKERS FOR DIABETIC NEPHROPATHY**

Hannah Lenamon

Texas Tech University Health Sciences Center School of Pharmacy
Amarillo, TX

Learning Objectives:

1. Summarize the 2016 and 2017 ADA diabetes guideline recommendations regarding nephropathy screening and prescribing of therapy based on screening results
2. Determine adherence to guideline recommendations within the Texas Tech Internal Medicine (IM), Family Medicine (FM), and Pediatric Partnered Adult (P) clinics
3. Evaluate the need for pharmacist intervention in appropriate screening and prescribing for diabetic nephropathy

Self-Assessment Questions:

1. Which of the following should NOT be used to screen for and/or diagnose diabetic nephropathy according to the *2017 ADA Standards of Medical Care in Diabetes* guideline recommendations? Select all that apply.
 - a. Spot urinary albumin-to-creatinine ratio
 - b. Spot urinary albumin alone
 - c. Estimated glomerular filtration rate
 - d. Urine creatinine alone
2. The overall adherence rate of screening for nephropathy in the Texas Tech clinics was:
 - a. 46.36%
 - b. 8.49%
 - c. 30.8%
 - d. 54.91%
3. Referring patients to the pharmacotherapy clinic for management of diabetes may increase the number of patients screened for nephropathy and prescribed appropriate therapy based on diagnostic results.
 - a. True
 - b. False

Answers:

1. B, D
2. C
3. A

**IMPACT OF ADHERENCE PACKAGING ON MEDICATION ADHERENCE AND HEALTH OUTCOMES
AMONG PATIENTS LIVING WITH DIABETES, HYPERLIPIDEMIA, OR HYPERTENSION**

Michelle Ndiulor
Love Oak Pharmacy
Eastland, TX

Learning Objectives:

1. Describe the potential impact of medication adherence packaging on patient adherence.
2. Compare/contrast various strategies to improve patient adherence to medications
3. Describe the potential benefits of medication adherence packaging programs on patient outcomes

Self-Assessment Questions:

1. Family members providing medication adherence reminders & feedback is an example of what type of adherence strategy?
 - a. Education
 - b. Medication adherence reminders
 - c. Social network engagement
 - d. Packaging interventions
2. Previous adherence packaging studies have shown strong evidence supporting improved patient health outcomes with use of packaging interventions.
 - a. True
 - b. False
3. Which of the following is an example a potential benefit of medication adherence packaging?
 - a. Reduced health care costs
 - b. Increased health service utilizations
 - c. Poor health outcomes

Answers:

1. C
2. B
3. A

**EVALUATING THE EFFECTIVENESS OF INTERVENTIONS MADE THROUGH THE VETERANS
AFFAIRS HYPOGLYCEMIA SAFETY INITIATIVE**

Kelly Hang

West Texas Veterans Affairs Health Care System
Big Spring, TX

Learning Objectives:

1. To determine the need for diabetic medication reduction and A1c goal relaxation in patients at high risk for hypoglycemia based on HSI's criteria that have no self-reported hypoglycemic events upon assessment.
2. To explore other potential risk factors and assessments that could be evaluated for improved monitoring and prevention of hypoglycemic events.

Self-Assessment Questions:

1. Which of the following are risk factors for hypoglycemia according to the Veteran Affairs Hypoglycemia Safety Initiative? Select all that apply.
 - a. Secretagogues
 - b. A1c <7%
 - c. Cognitive impairment / dementia
 - d. SCr >1.7 mg/dL
 - e. Low carb diet
2. Which medication has the lowest risk of causing hypoglycemia?
 - a. Saxagliptin
 - b. Metformin
 - c. Canagliflozin
 - d. Liraglutide
 - e. Insulin

Answers:

1. A-B-C-D
2. B

ANTICOAGULATION CLINIC MONITORING FOR DIRECT ORAL ANTICOAGULANT PATIENTS AND EFFECTS ON CLINICAL OUTCOMES

Dao C. Ly
Baylor Health Enterprises
Temple, TX

Learning Objectives:

1. At the conclusion of this presentation, participants should be able to identify 3 potential pharmacist roles in DOAC monitoring.
2. At the conclusion of this presentation, participants should be able to discuss the impact of anticoagulation clinic monitoring on DOAC patients.

Self-Assessment Questions:

1. In regards to monitoring DOAC patients, what are potential roles pharmacists can be involved in to optimize patient care?
 - a. Verifying appropriate indication
 - b. Appropriate dose adjustment
 - c. Medication reconciliation
 - d. All of the above
2. What clinical impact could pharmacists have on a patient receiving a DOAC through anticoagulation monitoring?
 - a. Increase recurrent thrombosis rates
 - b. Reduce adherence rates
 - c. Improve rates of bleeding and thrombosis events
 - d. Disregard drug-drug interactions

Answers:

1. D
2. C

ALCALDE XXXII

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION VIIB - AMBULATORY CARE

**IMPLEMENTATION OF AN OUTPATIENT PROTON PUMP INHIBITOR STEP-DOWN PROGRAM
WITHIN A COMMUNITY-OWNED HEALTH SYSTEM**

David Pham
Harris Health System
Houston, TX

Learning Objectives:

1. Explain how a PPI step-down program works
2. Identify the significance of implementing a taper and decreasing PPI usage
3. Compare literature describing the impact of a PPI step-down program

Self-Assessment Questions:

1. What is the typical duration of therapy for GERD?
 - a. 4-8 weeks
 - b. 8-16 weeks
 - c. 4-6 months
 - d. More than 6 months
2. What steps should take place prior to the go-live date if a health system decides to implement a PPI tapering order set?
 - a. Educate physicians on the taper and how to utilize it in the electronic health record system
 - b. Educate patients on their taper and how to adhere to their taper schedule
 - c. Educate pharmacists on the taper and how to counsel patients on their taper when they pick up their prescription from the pharmacy
 - d. A and C

Answers:

1. A
2. D

**FACTORS AFFECTING ACCESS TO CARE FOR LOW SOCIOECONOMIC STATUS PREGNANT
DIABETICS: IMPLICATIONS IN A COMMUNITY-BASED TEACHING HOSPITAL**

Michael Aucoin
Woman's Hospital
Baton Rouge, LA

Learning Objectives:

1. Identify the risks associated with diabetes in pregnancy to both mother and baby
2. Compare and contrast national guidelines regarding glycemic goals for pregnant versus non-pregnant diabetic patients
3. Describe the impact of pharmacist contribution to a healthcare team in the outpatient setting

Self-Assessment Questions:

- 1) What is the *fasting* blood glucose goal recommended by the American College of Obstetricians and Gynecologists (ACOG) for pregnant diabetic patients?
 - a. ≤ 95 mg/dl
 - b. 80-130 mg/dl
 - c. ≤ 100 mg/dl
 - d. 70-120 mg/dl
- 2) Which of the following are possible complications from diabetes in pregnancy that the mother and/or developing fetus may experience?
 - a. Shoulder dystocia
 - b. Fetal macrosomia
 - c. Lower risk of c-section delivery
 - d. Both A and B
 - e. All of the above
- 3) Which of the following are possible barriers to healthcare access for pregnant diabetic patients?
 - a. Lack of an adequate support system
 - b. Lack of transportation
 - c. Language barrier (non-English speaking)
 - d. All of the above

Answers:

- 1) A
- 2) D
- 3) D

**THE IMPACT OF CHRONIC KIDNEY DISEASE ON SULFONYLUREA- ASSOCIATED
HYPOGLYCEMIA**

Lauren Staton

CHRISTUS Trinity Mother Frances Health System
Tyler, TX

Learning Objectives:

1. Identify the general challenges for the management of type 2 diabetic patients in the setting of advanced chronic kidney disease
2. Explain the mechanism of action, pharmacokinetics, and adverse effects associated with sulfonylureas
3. Investigate current research regarding the impact of chronic kidney disease of sulfonylurea associated hypoglycemia in a cohort of ambulatory patients

Self-Assessment Questions:

1. Many of the oral antidiabetic agents currently available are safe to use in type 2 diabetic patients with chronic kidney disease and do not require renal dose adjustments.
 - a. True
 - b. False
2. In nondialysis chronic kidney disease (CKD) patients with type 2 diabetes, what are the preferred sulfonylurea agents and initial doses a patient should be started on?
 - a. Glipizide 2.5 mg daily
 - b. Glimepiride 1 mg daily
 - c. Glyburide 2.5 mg daily
 - d. Both A and B

Answers:

1. False
2. D

ASSESSMENT OF RENAL-ADJUSTED ORAL ANTIHYPERGLYCEMIC MEDICATIONS (METFORMIN VS DPP-4 INHIBITORS) FOR GLYCEMIC CONTROL IN PATIENTS WITH TYPE 2 DIABETES AND MODERATE RENAL IMPAIRMENT

Wei K. Yuet

VA North Texas Health Care System
Dallas, TX

Learning Objectives:

1. To compare glycemic control by metformin, saxagliptin, and sitagliptin in patients with moderate renal impairment
2. To investigate the side effects with metformin, saxagliptin, and sitagliptin in patients with moderate renal impairment

Self-Assessment Questions:

1. Which of the following is a risk factor for lactic acidosis in patients using metformin?
 - a. eGFR of 32 mL/minute/1.73m²
 - b. Infrequent alcohol use
 - c. Stable heart failure
 - d. Vitamin B12 deficiency
2. Which of the following is an effect of dipeptidyl peptidase-4 inhibitors?
 - a. Stimulates glucagon release
 - b. Improves satiety
 - c. Stimulates gastric emptying
 - d. Increases insulin release

Answers:

1. A
2. B

**ASSESSMENT OF METHADONE PRESCRIBING PRACTICES AND CARDIOVASCULAR OUTCOMES
IN THE PRIMARY CARE SETTING**

Shavea N. Zapata Juan

Veterans Affairs North Texas Health Care System and Texas Tech University Health Sciences Center
Dallas, TX

Learning Objectives:

1. Review national guidelines regarding methadone safety monitoring parameters for treatment of chronic pain.
2. Reflect on the pattern of methadone prescribing practices in the primary care clinics within the VA North Texas Health Care System (VANTHCS) and its impact on cardiovascular outcomes.
3. Discuss the role of nursing case managers in assisting providers to improve compliance with methadone safety monitoring guidelines in the primary care setting at VANTHCS.

Self-Assessment Questions

1. At what QTc threshold does Torsades de Pointes tends to be observed?
 - A. > 430 ms
 - B. > 450 ms
 - C. > 470 ms
 - D. > 500 ms
 - E. None of the above
2. According to the Veterans Integrated Service Network (VISN), how often should EKGs be performed on patients using oral methadone for chronic pain management?
 - A. Prior to starting methadone therapy
 - B. When methadone doses reach 30-40mg/day and again if the dose reaches 100mg/day
 - C. New risk factors for QTc prolongation arise or signs/symptoms of arrhythmia are suggested
 - D. Annual EKG once a stable dose has been reached
 - E. All of the above

Answers:

1. D
2. E

IMPACT OF A PHARMACIST-MANAGED ANTICOAGULATION CLINIC IN HEART FAILURE, LUNG TRANSPLANT AND LEFT VENTRICULAR ASSIST DEVICE (LVAD) PATIENT POPULATIONS

Louise De Souza
UT Southwestern Medical Center
Dallas, Texas

Learning Objectives:

1. Explain why chronic heart failure, lung transplant and LVAD patient populations are at increased risk for thromboembolism and bleeding
2. Justify pharmacist management of anticoagulation with warfarin in the chronic heart failure, lung transplant and LVAD patient populations

Self-Assessment Questions:

1. Left ventricular assist device (LVAD) patients are at an increased risk for bleeding because they:
 - a. Develop acquired von Willebrand syndrome
 - b. Have activation of damaged platelets
 - c. Have anemia of chronic disease
 - d. A and B
2. Pharmacist management of warfarin in LVAD, lung transplant, and chronic heart failure populations has led to an increase in time-in-therapeutic (TTR) range for these patient populations.
 - a. True
 - b. False

Answers:

1. D
2. A

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION VIIC - AMBULATORY CARE & GERIATRIC
PHARMACY**

THE IMPACT OF INTERDISCIPLINARY COLLABORATION ON DIABETIC PATIENTS WITH OR WITHOUT HYPERTENSION IN A CHARITY OUTPATIENT CLINIC

Lyndsay Cole
Baylor Scott & White Health
Dallas, TX

Learning Objectives:

1. Discuss the impact of interdisciplinary collaboration on diabetes-related outcomes
2. Demonstrate opportunities and role of pharmacists in improving healthcare outcomes and patient engagement for an indigent patient population

Self-Assessment Questions:

1. For this study, what is the goal HbA1c percentage for the charity patient population?
 - a. less than 6.5%
 - b. less than 7%
 - c. less than 8%
 - d. less than 9 %
2. True or False. Interdisciplinary teamwork including a pharmacist as a member of the care team is beneficial to diabetes patients by decreasing HbA1c..
 - a. True
 - b. False
3. If a clinic decides to implement a patient engagement survey, what would be the ideal timeframe between the initial survey and post intervention?
 - a. 1 months
 - b. 3 months
 - c. 6 months
 - d. 12 months

Answers:

1. C
2. A
3. B

**ASSESSMENT OF VITAMIN B12 MONITORING IN VETERANS WITH TYPE 2 DIABETES ON
METFORMIN THERAPY**

Haley A Runeberg
VA North Texas Health Care System
Dallas, TX

Learning Objectives:

1. Evaluate whether or not patients are indicated for vitamin B12 monitoring
2. Initiate vitamin B12 supplementation if appropriate

Self-Assessment Questions:

1. What are the current ADA *Standards of Medical Care in Diabetes* recommendations regarding vitamin B₁₂ monitoring in diabetic patients on metformin therapy?
 - a. The guidelines don't mention vitamin B₁₂ monitoring in patients on metformin
 - b. Periodic measurement of vitamin B₁₂ levels should be considered, especially in those with anemia or peripheral neuropathy
 - c. Vitamin B₁₂ monitoring is only recommended at baseline before initiating metformin
 - d. Initiate vitamin B₁₂ supplementation for all patients starting on long-term metformin therapy
2. Vitamin B₁₂ deficiency in patients on metformin therapy has been associated with:
 - a. Higher metformin dose
 - b. Longer metformin duration
 - c. Neither a nor b
 - d. Both a and b
3. When initiating diabetic patients on agents for peripheral neuropathy, which of the following should be considered:
 - a. Renal function
 - b. Vitamin B₁₂ status
 - c. Agents tried in the past
 - d. All of the above

Answers:

1. B
2. D
3. D

**EVALUATION OF FRACTURE RISK IN OLDER MALES RECEIVING BENIGN PROSTATIC
HYPERPLASIA THERAPY CONCOMITANT WITH BETA-BLOCKER THERAPY**

Koby Vasek

Hendrick Medical Center/Texas Tech University Health Sciences Center
Abilene, Texas

Learning Objectives:

1. Summarize the current literature in regards to falls/fractures and treatment for BPH
2. Identify risk factors for falls in a patient case
3. Evaluate the balance of treating BPH with potential medication side effects

Self-Assessment Questions:

1. A patient presents to your clinic with the following home medication list, which medications increase patients risk of falls (select all that apply):
 - Acetaminophen 1000 mg PO q6h
 - Lisinopril 20 mg PO q24h
 - Lasix 20 mg PO q24h
 - Potassium Chloride 20 mEq PO q24h
 - Atorvastatin 40 mg PO q24h
 - Tamsulosin 0.4 mg PO q24h
 - a. Acetaminophen
 - b. Lisinopril
 - c. Potassium Chloride
 - d. Tamsulosin
2. First line therapy for BPH has been extensively evaluated for an increased risk of falls?
 - a. True
 - b. False

Answers:

1. b and d
2. False

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION VIIIA - CRITICAL CARE

**EVALUATION OF ADHERENCE TO ANALGESIA AND SEDATION PROTOCOLS FOR
MECHANICALLY VENTILATED ADULTS IN THE INTENSIVE CARE UNIT**

Kelly Niemiec
Baptist Health System
San Antonio, Texas

Learning Objectives:

1. Outline the key principles of analgesia and sedation protocols
2. Assist healthcare providers in the selection and titration of sedatives and analgesics
3. Describe the impact of goal-directed delivery of analgesics and sedatives on clinical outcomes

Self-Assessment Questions:

1. Which sedation assessment tool has been shown to be most reliable and valid?
 - a. Richmond Agitation-Sedation Scale
 - b. New Sheffield Sedation Scale
 - c. Ramsay Sedation Scale
 - d. Motor Activity Assessment Scale
2. Deep levels of sedation are generally recommended for adult ICU patients.
 - a. True
 - b. False
3. Which outcomes do we aim to improve with goal-directed delivery of analgesics and sedatives?
 - a. Duration of mechanical ventilation
 - b. ICU length of stay
 - c. Incidence of delirium
 - d. All of the above

Answers:

1. A
2. False
3. D

**EVALUATION OF A PHARMACIST-DRIVEN 4TS HEPARIN-INDUCED THROMBOCYTOPENIA (HIT)
RISK ASSESSMENT PROTOCOL**

Sarah O'Rourke

CHRISTUS Trinity Mother Frances Health System
Tyler, TX

Learning Objectives:

1. Evaluate current guidelines for screening, diagnosis, and management of heparin-induced thrombocytopenia.
2. Discuss research project design, methods, and analyze final results.
3. Investigate clinical implications of a pharmacist-driven heparin-induced thrombocytopenia risk assessment protocol.

Self-Assessment Questions:

1. Which of the following patients has the highest risk of developing HIT?
 - a. 60-year-old male with lung cancer
 - b. 80-year-old female in the intensive care unit
 - c. 50-year-old male receiving a heparin drip for a STEMI after cardiac surgery
 - d. 40-year-old female receiving Lovenox 40 mg daily for DVT prophylaxis
2. Which of the following is the gold standard method for diagnosis of HIT?
 - a. Serotonin release assay (SRA)
 - b. Platelet factor 4 immunoassay (PF4)
 - c. 4Ts score
 - d. Monitoring platelet count fall
3. When calculating a 4Ts score, how far back in the patient's chart should you look for heparin exposure?
 - a. 30 days
 - b. 100 days
 - c. 6 months
 - d. 1 year

Answers:

1. C
2. A
3. B

EVALUATION OF ANTI-FACTOR XA (ANTI-XA) LEVELS TO ASSESS VTE PROPHYLAXIS DOSING OF ENOXAPARIN IN MORBIDLY OBESE PATIENTS: A RETROSPECTIVE SINGLE-CENTERED COHORT STUDY

Luis Ramirez

St. David's South Austin Medical Center
Austin, TX

Learning Objectives:

1. Explain the current literature regarding venous thromboembolism (VTE) prophylaxis in morbidly obese trauma patients
2. Define the process of selecting trauma patients for VTE prophylaxis, monitoring of Anti-Xa levels, and assessment for appropriate VTE prophylaxis

Self-Assessment Questions:

1. What is the current dosing strategy for VTE prophylactic dosing of enoxaparin in morbidly obese trauma patients?
 - a. Weight based dosing
 - b. Enoxaparin 40 mg SC daily or 30 mg SC daily ($CrCl \leq 30$ mL/min)
 - c. Enoxaparin 40 mg SC BID
 - d. None of the above
2. What is the goal anti-Xa level for VTE prophylaxis and the optimum time to measure an anti-Xa level after the 3rd dose of enoxaparin?
 - a. 0.2-0.5 IU/mL; 4 hours after enoxaparin dose given
 - b. 0.6-1.0 IU/mL; 4 hours after enoxaparin dose given
 - c. 0.6-1.0 IU/mL; 4 hours before enoxaparin dose given
 - d. 0.2-0.5 IU/mL; 4 hours before enoxaparin dose given

Answers:

1. D.
2. A.

RETROSPECTIVE EVALUATION OF THE INCIDENCE OF BLEEDING WITH HEPARIN USE AND ACT TARGET FOR OFF PUMP CABG

Lauren Olsen

Valley Baptist Medical Center –Brownsville
Brownsville, TX

Learning Objectives:

1. Describe the current literature on the use of ACT Targets in On and Off Pump CABG procedures
2. Analyze data collected regarding ACT Targets for Off Pump CABG Procedure
3. Evaluate the application of study in clinical settings

Self-Assessment Questions:

1. Which of the following is true about Off-Pump Coronary Bypass Surgery (OPCAB)
 - a. OPCAB is associated with more bleeding complications than On-Pump Coronary Bypass Surgery
 - b. There is no significant difference between off pump and on pump revascularization rate
 - c. There is no established guideline about the heparin dosing and level of anticoagulation to be maintained during OPCAB
 - d. There is no difference between the two procedures
2. ACT measurement greater than 500 is the optimal target for patient undergoing OPCAB
 - a. True
 - b. False

Answers:

1. C
2. B

EVALUATION OF THE USE OF INTRAVENOUS HYDROCORTISONE, THIAMINE, AND ASCORBIC ACID IN SEVERE SEPSIS AND SEPTIC SHOCK PATIENTS IN INTENSIVE CARE UNITS

Brittany Parker
Texas Health Harris Methodist Fort Worth
Fort Worth, Texas

Learning Objectives:

1. Explain the proposed mechanism of intravenous hydrocortisone, thiamine, and ascorbic acid (HTAA) in patients with septic shock
2. Compare the impact of HTAA therapy to current standard of care on clinical outcomes in sepsis and septic shock
3. Discuss the applicability of HTAA therapy in critically ill patients

Self-Assessment Questions:

1. Current guidelines state all of the following agents may be used in the treatment of septic shock EXCEPT:
 - a. Norepinephrine
 - b. Hydrocortisone
 - c. Empiric antibiotics
 - d. Ascorbic acid and thiamine
2. In 2017, the use of hydrocortisone, ascorbic acid, and thiamine was shown to reduce mortality in patients diagnosed with severe sepsis and septic shock.
 - a. True
 - b. False

Answers:

1. d
2. a

**ANTAGONISTS (H2RAS) IN STRESS ULCER PROPHYLAXIS (SUP) IN CRITICALLY ILL PATIENTS AT
A LARGE ACADEMIC MEDICAL CENTER**

Marilyn Mootz

University of Texas Southwestern Medical Center
Dallas, TX

Learning Objectives:

1. To identify the clinical indications for stress ulcer prophylaxis in the ICU setting based on the American Society of Health System Pharmacists (ASHP) Stress Ulcer Prophylaxis Guidelines
2. To classify long-term benefits and harms associated with the use of proton pump inhibitors (PPIs) and histamine-2 receptor antagonists (H2RAs)
3. To characterize overuse and misuse of PPIs and H2RAs within the critical care setting at an academic medical center, and associated implications for care

Self-Assessment Questions:

1. Which of the following is NOT an indication for the use of PPIs or H2RAs for stress ulcer prophylaxis in the intensive care unit?
 - a. Mechanical ventilation for < 24 hours
 - b. Traumatic brain injury or spinal cord injury
 - c. Sepsis receiving high-dose corticosteroids
 - d. Intensive care unit stay of 10 days due to ongoing GI bleed
2. Which of the following is NOT a potential harm of using PPIs and/or H2RAs?
 - a. Development of vitamin and mineral deficiencies with long-term use
 - b. Development of tolerance to the drug
 - c. Development of osteoporosis
 - d. Development of rebound acid secretion during therapy

Answers:

1. (A). Mechanical ventilation for < 24 hours
2. (D). Development of rebound acid secretion during therapy

AN EVALUATION OF INTRAVENOUS TO ORAL DILTIAZEM CONVERSION IN INTENSIVE CARE UNIT PATIENTS WITH ATRIAL FIBRILLATION AT A COUNTY TERTIARY TEACHING HOSPITAL

Bethannie D Dziuk
TTUHSC - SOP
Lubbock, Texas

Learning Objectives:

1. Identify complications associated with inappropriate medication management in patients with a diagnosis of atrial fibrillation with rapid ventricular rate
2. Categorize what percentage of patients admitted to an ICU are converted to appropriate oral therapy after intravenous diltiazem infusion at a teaching hospital

Self-Assessment Questions:

1. Which of the following is an appropriate recommendation for initial therapeutic management of atrial fibrillation with rapid ventricular rate?
 - a. Continuous diltiazem 10mg/hour for 24 hours
 - b. Continuous verapamil 15mg/hour, titrate to goal heart rate
 - c. Metoprolol IV 25 mg bolus x 1
 - d. Metoprolol tartrate 50mg PO BID
2. Once a patient's heart rate is stabilized on a diltiazem infusion (5mg/hour), which of the following is an appropriate conversion to a long-term, oral option?
 - a. Metoprolol tartrate 50mg PO BID
 - b. Diltiazem 60mg PO TID
 - c. Metoprolol succinate 100mg PO daily
 - d. Carvediolol 6.25mg PO BID
3. Which of the following are complications associated with inappropriate conversion?
 - a. Recurrence of atrial fibrillation
 - b. Increase in health care cost
 - c. Hemodynamic instability
 - d. All of the above

Answers:

1. A
2. B
3. D

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION VIIB - CRITICAL CARE

EVALUATION OF THE EFFICACY OF VITAMIN K IN BLEEDING PATIENTS WITH LIVER DISEASE

Makenna Smack

Memorial Hermann Hospital System
Houston, Texas

Learning Objectives:

1. Describe the coagulopathy of liver disease
2. Outline current literature on the use of vitamin K in patients with liver disease
3. Evaluate the impact of vitamin K administration on the blood product requirements of bleeding patients with liver disease

Self-Assessment Questions:

1. Patients with liver disease are at an increased risk of:
 - a. Bleeding
 - b. Thrombosis
 - c. Both bleeding and thrombosis
2. This study showed that the use of vitamin K did not reduce the number of blood products administered to bleeding patients with liver disease.
 - a. True
 - b. False
 - c. Inconclusive

Answers:

1. C
2. A

EVALUATION OF OPEN FRACTURE ANTIBIOTIC PROPHYLAXIS AND INCIDENCE OF SURGICAL SITE INFECTIONS IN ADULT TRAUMA PATIENTS

Rosanna Dastoori

Our Lady of the Lake Regional Medical Center
Baton Rouge, LA

Learning Objectives:

1. Identify appropriate antibiotic regimens based on Gustillo-Anderson open fracture classification.
2. Evaluate the impact of targeted physician education on appropriate utilization of antimicrobial prophylaxis for open fractures.

Self-Assessment Questions:

1. Based on the Gustillo-Anderson classification system, type III fractures require additional gram negative coverage. Which of the following regimens would provide adequate coverage for a type III fracture?
 - a. Ancef 2g every 8 hours
 - b. Ancef 2g every 8 hours and Penicillin G 4 million Units every 4 hours
 - c. Ancef 2g every 8 hours and Gentamicin 5mg/kg once daily dosing
2. Open fractures with soil or fecal contamination, or farm injuries require additional clostridium coverage with Penicillin.
 - a. True
 - b. False

Answers:

1. C.
2. A.

RETROSPECTIVE REVIEW OF INTRAPLEURAL ADMINISTRATION OF TPA/DNASE

Holly Carmody

Baylor University Medical Center

Dallas, TX

Learning Objectives:

1. Explain the pharmacology of intrapleural tissue plasminogen activator (tPA) and deoxyribonuclease (DNase) when used for pleural effusions
2. Identify appropriate medication use of intrapleural tPA/DNase for pleural effusions

Self-Assessment Questions:

1. Correctly identify the drug with its respective mechanism of action
 - a. tPA: prevents the conversion of fibrinogen to fibrin
 - b. tPA: reduces mucous viscosity
 - c. DNase: reduces mucous viscosity
 - d. DNase: binds fibrin and converts plasminogen to plasmin
2. Studies have shown what benefit(s) from using combination intrapleural tPA/DNase for pleural effusions
 - a. Reductions in effusion volume
 - b. Decreased need for surgical referral
 - c. Decreased length of hospital stay
 - d. All of the above
3. Which patient populations may be indicated to receive intrapleural tPA/DNase for pleural effusions?
 - a. Patients with inadequate chest tube drainage after 24 hours
 - b. Patients at high risk for bleed
 - c. Patients who are not surgical candidates
 - d. A and C

Answers:

1. C
2. D
3. D

**THE IMPACT OF A PHARMACIST-DRIVEN PROPOFOL TRIGLYCERIDE MONITORING PROGRAM
IN AN ICU**

Jacquelyn Glockner
Hendrick Medical Center
Abilene, Texas

Learning Objectives:

1. Discuss the complications of propofol and triglycerides
2. Identify the impact of pharmacist-driven propofol monitoring

Self-Assessment Questions:

1. Which of the following is not generally considered a risk factor for hypertriglyceridemia?
 - a. Alcohol consumption
 - b. 2nd generation antipsychotics
 - c. Sepsis
 - d. TPN
2. True or False: Hypertriglyceridemia increases cardiovascular risk more in women than men
 - a. True
 - b. False
3. Which of the following is a benefit of using propofol in an ICU?
 - a. Predictable therapeutic response
 - b. Negligible caloric impact
 - c. Lack of ADRs
 - d. Ease of titration

Answers:

1. C
2. A
3. D

SURVEILLANCE ULTRASOUND IN THE NEURO INTENSIVE CARE UNIT: TIME TO DEEP VEIN THROMBOSIS DIAGNOSIS

Kristi Hargrove
University Health System
San Antonio, TX

Learning Objectives:

1. Describe risk factors for venous thromboembolism in hospitalized patients
2. Identify the gap in current literature and controversy surrounding use of surveillance ultrasound in neuro intensive care unit patients
3. Evaluate outcome differences between patients screened for deep vein thrombosis versus those who were identified by symptoms

Self-Assessment Questions:

1. Which of the following are risk factors associated with development of DVT:
 - a. Prolonged immobility
 - b. Obesity
 - c. Spinal cord injury
 - d. All of the above
2. What is thought to be the benefit of screening patients without symptoms for DVT in the Neuro ICU?
 - a. Assess and potentially treat DVT to prevent further progression
 - b. Prevent secondary PE associated mortality
 - c. Allows for early discontinuation of DVT prophylaxis
 - d. Both A & B
3. T/F: Routine surveillance ultrasound is currently recommended by the Neurocritical Care Society.
 - a. True
 - b. False

Answers:

1. D
2. D
3. B

**COMPARATIVE SAFETY AND EFFICACY OF CONTINUOUS INFUSION AND INTERMITTENT BOLUS
NEOSTIGMINE FOR ACUTE COLONIC PSEUDO-OBSTRUCTION**

Lucas W. Smedley
University Health System
San Antonio, TX

Learning Objectives:

1. Describe the diagnosis and pathophysiology of acute colonic pseudo-obstruction in critically ill patients
2. Compare and contrast the risks and benefits of neostigmine administered as a continuous infusion and as an intermittent bolus
3. Justify the use of neostigmine for treatment of acute colonic pseudo-obstruction

Self-Assessment Questions:

1. What is the prevailing hypothesis for the pathophysiology of acute colonic pseudo-obstruction?
 - a. Increased sympathetic nervous system activity on colon
 - b. Auto-immune attack on colonic neurons
 - c. Decreased parasympathetic activity at colon
 - d. Blockage preventing passage of stool
2. Neostigmine works by directly blocking norepinephrine activity at adrenergic receptors.
 - a. True
 - b. False
3. There is only a single randomized trial evaluating the use of continuous infusion neostigmine for colonic ileus.
 - a. True
 - b. False

Answers:

1. C
2. B
3. A

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For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION VIIC - HEALTH-SYSTEM PHARMACY
ADMINISTRATION & MANAGEMENT**

EMPLOYER AND STUDENT PERCEPTIONS OF ESSENTIAL QUALITIES AND SKILLS IN NEW PHARM.D. GRADUATES ENTERING THE WORKFORCE

Stanley A. Luc

Texas Tech University Health Sciences Center School of Pharmacy
Amarillo, TX

Learning Objectives:

1. Name key elements of educational outcomes from the Accreditation Council for Pharmacy Education (ACPE) Standards 2016 that describe soft skills
2. List characteristics that have been identified as most valued by the pharmacy practice community when hiring new pharmacy graduates
3. Compare the perceptions of pharmacy employers and students regarding essential qualities and skills for a new pharmacy practitioner

Self-Assessment Questions:

1. Which of the following Accreditation Council for Pharmacy Education (ACPE) Standards 2016 educational outcomes is least likely to be considered a soft skill?
 - a. Foundational knowledge
 - b. Communication
 - c. Leadership
 - d. Professionalism
2. According to published literature, which of the following characteristics is the most highly valued by the pharmacy practice community when hiring a recently graduated pharmacist?
 - a. Adaptable
 - b. Communication
 - c. Critical thinking
 - d. Professional
3. T/F: Preliminary results indicated pharmacy employers rated innovation and entrepreneurship as the most essential skill for new Pharm.D. graduates entering the workforce.
 - a. True
 - b. False

Answers:

1. A
2. B
3. B

**OPTIMIZATION OF THE MEDICATION-USE PROCESS IN A VETERANS AFFAIRS ACADEMIC
TEACHING HOSPITAL TO PREVENT MEDICAL SUPPLY PRESCRIPTION ERRORS**

Alan P. Moyer

Michael E. DeBakey Veterans Affairs Medical Center
Houston, TX

Learning Objectives:

1. Review current LEAN Management principles to remove workflow inefficiencies, prevent medical supply prescription errors, and decrease medication fill times to improve patient care
2. Discuss ostomy supply prescribing trends, methods to consolidate resources, and shorten the time to complete prior authorization drug requests
3. Evaluate operations and reduce the wait time for patients to receive their medical supplies

Self-Assessment Questions:

1. A T-bone diagram is a Lean Management analysis tool that systematically identifies and presents possible causes of an effect?
 - a. True
 - b. False
2. According to Lean Management principles, waste is any step in a process that is not required to complete a process successfully. Which of these is part of the eight forms of waste?
 - a. Waiting
 - b. Inventory
 - c. Transportation
 - d. All of the above

Answers:

1. b (False)
2. d (All of the above)

VALUE OF IMPLEMENTING A CEFAZOLIN INTRAVENOUS PUSH PROGRAM IN A SURGICAL SETTING

Ilhiana Rangel

Memorial Hermann Memorial City Medical Center
Houston, Texas

Learning Objectives:

1. Discuss using the LEAN methodology to evaluate pre-operative antibiotic use in surgery.
2. Evaluate the workflow changes associated with administering cefazolin via intravenous push (IVP) versus intravenous piggy back (IVPB).
3. Provide justification for utilizing this methodology to expand to other antibiotics administered via intravenous push (IVP).

Self-Assessment Questions:

1. Which of the following are principles of the Lean methodology?
 - a. eliminate waste
 - b. promote flow
 - c. continuously improve the processes and the people
 - d. All of the above
2. What class of antibiotics can administered via IV push?
 - a. Beta-lactams
 - b. aminoglycosides
 - c. fluoroquinolones
 - d. glycopeptides
3. A value stream map is a big-picture view of how a system transforms supplies into finished goods for the customer?
 - a. True
 - b. False

Answers:

1. D
2. A
3. A

**EVALUATING THE BENEFITS OF IMPLEMENTING MAIL ORDER PHARMACY SERVICES AT A
COMMUNITY HEALTH SYSTEM: A RETROSPECTIVE STUDY**

Elizabeth Mary Villanueva
Harris Health System
Houston, Texas

Learning Objectives:

1. Describe the possible effects of mail order on both patient satisfaction scores and wait times.
2. Explain the barriers preventing medication adherence and the role mail order pharmacy's play in minimizing these barriers.
3. Describe the potential outcomes that can result from implementing a mail order service at a healthcare system.

Self-Assessment Questions:

1. Which of the following is a potential factor that could lead to decrease in medication adherence that can also be alleviated by the implementation of mail order service?
 - a. Lack of transportation
 - b. Cost of medication
 - c. Low health literacy
 - d. All of the above
2. How can mail order decrease wait times?
 - a. Decrease the number of prescriptions filled in the pharmacy
 - b. Decrease the number of patients who come into the pharmacy to pick up prescriptions
 - c. Both a and b
 - d. None of the above
3. Which of the following are examples of long-term benefits of implementing a mail order service in a hospital system?
 - a. Decrease hospital admissions
 - b. Improve health outcomes
 - c. Increase pharmacy clinical services
 - d. All of the above

Answers:

1. A
2. C
3. D

CLINICAL PHARMACY FROM THE PERSPECTIVE OF THE PHARMACIST

Arika Mike
Baylor Health Enterprises
Temple, TX

Learning Objectives:

1. Describe the major elements of the American College of Clinical Pharmacy unabridged definition of clinical pharmacy
2. Identify study participant level of agreement with statements about clinical pharmacy
3. List the top five most likely duties of a clinical pharmacist as well as the top three most significant barriers to practicing clinical pharmacy, identified by study participants

Self-Assessment Questions:

1. Which of the following is not a major element of the American College of Clinical Pharmacy unabridged definition of clinical pharmacy?
 - a. "The discipline of clinical pharmacy"
 - b. "The clinical pharmacist"
 - c. "Roles within the healthcare system"
 - d. "Pharmacy operations role"
2. All of the following are top duties of a clinical pharmacist identified by study participants, EXCEPT:
 - a. Monitoring medication therapy
 - b. Educating patients about medications
 - c. Taking on additional leadership roles
 - d. Completing medication therapy reviews
3. Which of the following is a top barrier to practicing clinical pharmacy identified by study participants?
 - a. Lack of funds to implement services
 - b. More academic training needed
 - c. Limited scope of practice
 - d. Lack of access to patient health records

Answers:

1. D
2. C
3. A

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION IXA - EMERGENCY MEDICINE

TIME TO FIRST DOSE ANTIBIOTIC ADMINISTRATION FROM ORDER PLACEMENT IN SEVERE SEPSIS AND SEPTIC SHOCK ADMITTED TO THE EMERGENCY DEPARTMENT

Emily Johnston

Our Lady of the Lake Regional Medical Center
Baton Rouge, Louisiana

Learning Objectives:

1. Discuss current literature and outcomes regarding time to first dose antibiotic administration in septic patients.
2. Evaluate time to antibiotic administration in patients with severe sepsis and septic shock in the Our Lady of the Lake Regional Medical Center Emergency Department prior to and post-intervention.

Self-Assessment Questions:

1. Based on the Surviving Sepsis campaign, what is the time frame in which antibiotics should be delivered?
 - a. Less than two hours
 - b. Less than one hour
 - c. Less than three hours
 - d. Less than six hours
2. If obtaining blood cultures lead to a delay in administration of antibiotics, the antibiotics should be held in order to ensure appropriate blood culture results.
 - a. True
 - b. False

Answers:

1. B
2. B

**ASSESSING OUTCOMES OF SEPTIC PATIENTS TRANSITIONING FROM EMERGENCY
DEPARTMENT**

Kevin Lei

CHI St. Luke's Health Baylor St. Luke's Medical Center
Houston, TX

Learning Objectives:

1. Assess correlation between sepsis 3-hour bundle compliance and mortality
2. Assess correlation between sepsis 3-hour bundle compliance and hospital length of stay

Self-Assessment Questions:

1. Which of the following is not part of the three-hour sepsis bundle?
 - a. Measure lactate
 - b. Obtain blood cultures prior to administration of antibiotics
 - c. Vasopressors for patients with MAP <65 mmHg
 - d. Administer broad spectrum antibiotics
2. The 2014 Evidence Based Management of Sickle Cell Disease: Expert Panel Report recommends reassessing pain within 15-30 minutes of analgesic administration and escalating the dose by 25% until pain is controlled.
 - a. True
 - b. False
3. This retrospective study found that administering IV fluids and pain medication within 1 hour of ED arrival:
 - a. Reduced ED length of stay compared to patients that did not receive IV fluids and pain medication within 1 hour of ED arrival, with numerical and statistical significance
 - b. Reduced ED length of stay compared to patients that did not receive IV fluids and pain medication within 1 hour of ED arrival, with numerical difference but not statistically significant difference
 - c. Increased ED length of stay compared to patients that did not receive IV fluids and pain medication within 1 hour of ED arrival, with numerical and statistical significance
 - d. Increased ED length of stay compared to patients that did not receive IV fluids and pain medication within 1 hour of ED arrival, with numerical difference but not statistically significant difference

Answers:

1. Answer c
2. Answer a
3. Answer a

**PRESCRIBING PATTERNS FOR THE OUTPATIENT TREATMENT OF URINARY TRACT INFECTIONS
IN PATIENTS DISCHARGED FROM THE EMERGENCY DEPARTMENT**

Erin Moody
Memorial Hermann Southwest Hospital
Houston, TX

Learning Objectives:

1. To identify areas of opportunity regarding the prescription of antimicrobials for the treatment of urinary tract infection in the emergency department
2. To describe appropriateness of urinalysis (and subsequent urine culture) collection based on patients presenting clinical signs and symptoms
3. To describe the correlation between urinalysis and urine culture results and indications for the treatment of urinary tract infection

Self-Assessment Questions:

1. Which of the following would be an appropriate treatment plan for uncomplicated cystitis in a symptomatic 32 yo female with no comorbidities and no known drug allergies?
 - a. Levofloxacin 750 mg Q24H x 10 days
 - b. Ciprofloxacin 500 mg Q12H x 3 days
 - c. TMP-SMX 160-800 mg Q12H x 7 days
 - d. Nitrofurantoin 100 mg Q12H x 7 days
2. What is considered a significant colony count in a midstream clean-catch urine sample?
 - a. < 10,000 CFU/ml
 - b. 10,000-50,000 CFU/ml
 - c. 50,000-100,000 CFU/ml
 - d. > 100,000 CFU/ml

Answers:

1. B
2. D

THE IMPACT OF VANCOMYCIN LOADING DOSES ON ACUTE KIDNEY INJURY AMONG ELDERLY PATIENTS BEING TREATED IN THE EMERGENCY DEPARTMENT FOR SUSPECTED SEPSIS

Holly Ryan

Memorial Hermann Memorial City Medical Center
Houston, TX

Learning Objectives:

1. Outline existing recommendations regarding vancomycin loading doses based on current guidelines and available literature.
2. Identify potential patient-specific and treatment-related risk factors associated with acute kidney injury.
3. Determine the most appropriate loading dose based on patient-specific information and available guidelines as this relates to critically ill elderly patients.

Self-Assessment Questions:

1. A 65 year old female presents to the emergency department with signs and symptoms concerning for sepsis. What is the most appropriate loading dose based on current recommendations? (ABW 40 kg)
 - a. 1250 mg
 - b. 2000 mg
 - c. 15 mg/kg
 - d. None of the above
2. Which of the following have been associated with an increased risk of acute kidney injury in hospitalized patients?
 - a. Patients aged 60 years and older.
 - b. Medications that alter renal hemodynamics
 - c. Increased exposure to nephrotoxic medications
 - d. B and C
3. Rapid attainment of vancomycin target trough levels of 15 – 20 mg/L for patients with serious infections including sepsis provides greater probability of:
 - a. Achieving appropriate pharmacodynamics targets.
 - b. Improved tissue penetration.
 - c. Greater risk of red man syndrome
 - d. A and B

Answers:

1. A
2. D
3. D

**SAFETY OF WEIGHT-BASED INITIAL DOSING OF VANCOMYCIN IN THE EMERGENCY
DEPARTMENT**

Haley Cockroft Smith
University Health Shreveport
Shreveport, LA

Learning Objectives:

1. Describe the incidence of acute kidney injury in patients who received a weight-based vancomycin dose in the emergency department
2. Compare the incidence of therapeutic first trough in patients who received a weight-based vancomycin dose in the emergency room

Self-Assessment Questions:

1. True or False: There was an increased incidence of acute kidney injury in patients that received vancomycin doses of ≥ 15 mg/kg in the emergency department
 - a. True
 - b. False
2. What is the target therapeutic trough for a critically ill patient?
 - a. 6-12 mcg/mL
 - b. 10-15 mcg/mL
 - c. 15-20 mcg/mL

Answers:

1. B
2. C

**USE OF SUCCINYLCHOLINE VS ROCURONIUM FOR RAPID SEQUENCE INTUBATION IN
EMERGENCY DEPARTMENT PATIENTS WITH NEUROLOGIC EMERGENCIES**

Sitara Paladugu
JPS Health Network
Fort Worth, Texas

Learning Objectives:

1. Evaluate whether succinylcholine or rocuronium is the more optimal paralytic for rapid sequence intubation in the emergency department in patients with spontaneous, traumatic, or anticoagulant-induced intracerebral hemorrhage.
2. Determine the effect of paralytic type and dose on intensive care unit length of stay, time to analgesedation, and overall neurological outcomes in patients with neurologic injuries.

Self-Assessment Questions:

1. There is a paucity of literature regarding which neuromuscular blocking agent to utilize for rapid sequence intubation (RSI) in neurologic emergency patients.
True
False
2. All of the following are advantages of succinylcholine use in RSI except for:
 - a. Quick onset of action
 - b. Short half-life
3. Increased intracranial pressure
Which neurologic emergency patients were included in our study?
 - a. Spontaneous intracerebral hemorrhage
 - b. Traumatic intracerebral hemorrhage
 - c. Anticoagulant induced intracerebral hemorrhage
 - d. All of the above were included in our study

Answers:

1. True
2. C
3. D

IMPACT OF PENICILLIN ALLERGY VERIFICATION ON ANTIBIOTIC PHYSICIAN PRESCRIBING PRACTICES IN THE EMERGENCY DEPARTMENT

John Witucki
Medical Center Hospital
Odessa, TX

Learning Objectives:

1. understand the cost and safety benefits of penicillin allergy verification in the emergency department.

Self-Assessment Questions:

1. Which of the following provide explanations for why a patient with a previous penicillin allergy no longer exhibits an allergic reaction upon exposure?
 - a. Individual allergies and sensitivities change over time, so the patient may simply no longer be allergic
 - b. Adverse event may have been improperly documented as an allergy
 - c. Patient may have insufficient memory or documentation of allergic event and may never really have had an allergy.
 - d. All of the above
2. Why is it beneficial to clarify documented penicillin allergies?
 - a. Allergy clarification assists prescribers in assessing risk of serious allergic reaction should they select another beta-lactam antibiotic.
 - b. Allergy verification allows more frequent use of our most broad-spectrum antibiotics, decreasing the societal burden of infectious diseases worldwide.
 - c. Allergy verification helps mediate the rise of antibiotic resistance.
 - d. A and C

Answers:

1. D
2. D

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION IXB - ONCOLOGY

**EFFECT OF CONCOMITANT ACID-REDUCING AGENTS ON EFFICACY OF CAPECITABINE IN
ADVANCED GASTROINTESTINAL CANCERS**

Andrea Clarke
University Health Shreveport
Shreveport, LA

Learning Objectives:

1. Explain capecitabine's place in therapy for gastrointestinal cancers.
2. Compare progression-free survival in patients taking capecitabine with and without concurrent acid-reducing agents.
3. Outline treatment options if acid-reducing agents reduce the efficacy of capecitabine.

Self-Assessment Questions:

1. Which of the following is an advantage of oral chemotherapeutics?
 - a. Reduced drug interactions
 - b. Fewer adverse effects
 - c. Ease of administration
2. What are some potential options for dealing with an interaction between capecitabine and acid-reducing agents? Select all that apply.
 - a. Discontinuation or de-escalation of the acid-reducing agent
 - b. Use of a 5-fluorouracil-based regimen rather than a capecitabine-based regimen
 - c. Separating PPI and capecitabine administration time

Answers:

1. C
2. A & B

ASSESSMENT OF THYROID FUNCTION MONITORING IN MELANOMA PATIENTS

Michael Frei
University of Texas MD Anderson Cancer Center
Houston, TX

Learning Objectives:

1. Determine the characteristics of thyroid dysfunction in patients treated with PD-1 inhibitor monotherapy.
2. Provide recommendations for frequency of thyroid function tests in patients treated with PD-1 inhibitors.

Self-Assessment Questions:

- 1) What percentage of patients would we expect to experience hypothyroidism while being treated with a PD-1 inhibitor? (2)
 - a. 3-5%
 - b. 4-10%
 - c. 10-15%
 - d. 15-20%
- 2) What is the median times to onset of hypothyroidism in patients treated with PD-1 inhibitors? (1)
 - a. 3-4 weeks
 - b. 7-8 weeks
 - c. 12-14 weeks
 - d. 15-16 weeks

Answers:

1. B
2. C

REAL WORLD UTILIZATION OF ORAL NON-SMALL CELL LUNG CANCER AND OVARIAN CANCER AGENTS IN THE MILITARY HEALTH SYSTEM

Zachary M. Leftwich

Defense Health Agency Pharmacy Operations Division
San Antonio, TX

Learning Objectives:

1. Discuss the importance of assessing real world cost effectiveness in high cost medication classes
2. Describe the clinical effectiveness of ALK and PARP inhibitors with regard to death, duration of treatment, and time to treatment change
3. Review differences between real world and clinical trial data for ALK and PARP inhibitors

Self-Assessment Questions:

1. Which ALK inhibitor had the highest utilization in the MHS in 2017?
 - a. Niraparib
 - b. Brigatinib
 - c. Crizotinib
 - d. Ceritinib
2. PARP inhibitors inhibit poly (ADP-ribose) polymerase enzymes in order to:
 - a. Decrease tumor size in patients with Non-Small Cell Lung Cancer
 - b. Inhibit tumor growth in patients with Ovarian Cancer
 - c. Improve pulmonary function tests in patients with Non-Small-Cell Lung Cancer
 - d. A and B
3. What is one concerning adverse drug reaction in the ALK inhibitor class?
 - a. Myalgia
 - b. Diverticulitis
 - c. Increased blood glucose
 - d. Interstitial lung disease

Answers:

1. C
2. B
3. D

ADMINISTRATION OF PEGFILGRASTIM ON DAY 3 OF FOLFOX OR FOLFIRI CHEMOTHERAPY

Donyika Joseph

Our Lady of the Lake Regional Medical Center
Baton Rouge, LA

Learning Objectives:

1. Describe the National Comprehensive Cancer Network guideline recommendations for the administration of pegfilgrastim.
2. Justify the administration of pegfilgrastim on day 3 of FOLFOX or FOLFIRI chemotherapy.

Self-Assessment Questions:

1. Conventionally, when is pegfilgrastim administered for a FOLFOX or FOLFIRI chemotherapy regimen?
A: Conventionally, pegfilgrastim is administered on day 4 or 5 of FOLFOX or FOLFIRI
2. What is the definition of febrile neutropenia?
A: Febrile neutropenia is defined as a single temperature $\geq 38.3^{\circ}\text{C}$ orally or $\geq 38^{\circ}\text{C}$ over one hour combined with neutropenia of < 500 neutrophils/microliter or $< 1,000$ neutrophils/microliter and a predicted decline of ≤ 500 neutrophils/microliter over the next 48 hours.

DURATION OF THERAPY OF ANTIBIOTICS FOR *STAPHYLOCOCCUS AUREUS* BACTEREMIA IN ONCOLOGY PATIENTS

Kori E. Daniels
Scott & White Medical Center
Temple, Texas

Learning Objectives:

1. Determine the appropriate duration of antibiotic therapy for *Staphylococcus aureus* bacteremia based on IDSA guideline recommendations
2. Examine the impact of prolonged durations of antibiotic therapy on treatment success in *Staphylococcus aureus* bacteremia in the oncology patient

Self-Assessment Questions:

1. How many weeks minimum do the guidelines recommend treating *Staphylococcus aureus* bacteremia?
 - A. 2 weeks
 - B. 3 weeks
 - C. 4 weeks
 - D. 6 weeks

Answer – A

2. Compared to shorter durations, prolonged durations of antibiotic therapy:
 - A. Lead to increased rates of relapse/reinfection
 - B. Lead to decreased rates of relapse/reinfection
 - C. Have similar rates of relapse/reinfection

Answer – C

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION IXC - ONCOLOGY & PALLIATIVE CARE/PAIN
MANAGEMENT**

**ASSESSMENT OF HYPERSENSITIVITY REACTIONS WITH RITUXIMAB USED AT A QUATERNARY
MEDICAL CENTER**

Amanda Sirisaengtaksin

CHI St Luke's Health Baylor St Luke's Medical Center
Houston, TX

Learning Objectives:

1. Determine the rate at which rituximab is given without premedication orders
2. Assess rate of hypersensitivity reactions to rituximab
3. Determine which premedications are given for rituximab

Self-Assessment Questions:

1. Rituximab targets which membrane marker:
 - a) CXCR5
 - b) CD4
 - c) GLP-1
 - d) CD20
2. Pharmacologic prophylaxis for infusion-related hypersensitivity reactions include all of the following EXCEPT:
 - a) Steroids
 - b) Antacids
 - c) Acetaminophen
 - d) Antihistamines
3. According to the findings of this retrospective study, which of the following statements is TRUE:
 - a) Patients who did not receive premedication experienced hypersensitivity reactions to rituximab
 - b) Patients who received premedication experienced hypersensitivity reactions to rituximab
 - c) Patients who received premedication did not experience hypersensitivity reactions to rituximab

Answers:

1. D
2. B
3. B

**ASSESSMENT OF RISK FACTORS FOR IFOSFAMIDE-INDUCED NEUROTOXICITY AT AN ACADEMIC
MEDICAL CENTER**

Elizabeth Travers
University Health
Shreveport, LA

Learning Objectives:

1. Identify risk factors for ifosfamide induced neurotoxicity
2. Describe the theoretical drug interaction between fosaprepitant and ifosfamide

Self-Assessment Questions:

1. What is the neurotoxic metabolite of ifosfamide?
 - a. N-Ifosfamide
 - b. Chloroifosfamide
 - c. Chloroacetaldehyde
 - d. Hydrogen Sulfide
2. Which of the following correctly describes fosaprepitant effect on cytochrome P450 enzymes?
 - a. Inhibits CYP 3A4
 - b. Induces CYP 2C9
 - c. Inhibits CYP 2C9
 - d. A and C
 - e. A, B and C

Answers:

1. C
2. E

**EVALUATION OF THE OPIOID SAFETY INITIATIVE THROUGH Z-DRUG PRESCRIBING TRENDS
POST BENZODIAZEPINE DISCONTINUATION IN A VETERAN POPULATION**

Gordon Ang
Central Texas Veterans Health Care System
Temple, Texas

Learning Objectives:

1. Identify risks of treating with opioid and benzodiazepines concurrently.
2. Evaluate the impact of the Opioid Safety Initiative on z-drug prescribing.
3. Describe the impact of z-drug and opioid concurrence among Veterans previously treated with an opioid and benzodiazepine concurrently.

Self-Assessment Questions:

1. All of the following are at an increased risk when treating with opioids and benzodiazepines concurrently except:
 - a. Motor vehicle accidents
 - b. Fatal poisoning/overdose
 - c. Falls/injuries
 - d. Hyperalgesia
2. VA/DoD Guideline recommendation to not prescribe opioids and z-drugs concurrently is based on evidence showing:
 - a. Increase in drug overdose
 - b. Increase in fall/fractures
 - c. Increase in substance misuse
 - d. Increase in direct medical costs

Answers:

1. D
2. A

**SPINAL SURGERY PATIENTS WITH CHRONIC PAIN: A CHALLENGE IN ACUTE PAIN
MANAGEMENT?**

Darshil Dodhiya

CHRISTUS Mother Frances Hospital

Tyler, TX

Learning Objectives:

1. Describe opioid tolerance and discuss the unique needs of patients on chronic pain medications
2. Devise a project for evaluation of acute pain management in patients with chronic pain undergoing elective spinal surgery
3. Assess the current acute pain management in patients with chronic pain undergoing elective spinal surgery

Self-Assessment Questions:

1. The following must be included when developing assessment plans for acute pain management, except:
 - a. Pain scores, opioid therapy, reassessment
 - b. Documentation of adjuvant analgesic therapies
 - c. Documentation and evaluation from over-sedation
 - d. Pre-op fluid use
2. Chronic opioid use
 - a. Does not affect long-term prescribing practices and doses prescribed
 - b. Leads to improved pain control
 - c. Leads to tolerance to doses prescribed and requirement of higher dose to manage equivalent pain.

Answers:

1 – D

2 – A

EVALUATING THE CHANGE IN DAILY MORPHINE MILLIGRAM EQUIVALENTS IN VETERANS ON LONG-TERM OPIOID THERAPY AFTER THE RECEPTION OF AN OPIOID SAFETY INFORMATION LETTER

Jessica Merlo
West Texas VAHCS
Big Spring, TX

Learning Objectives:

1. To identify the importance of pharmacist-led interventions to reduce overall opioid use in the midst of a national opioid overdose crisis
2. To assess the impact of a pharmacy-distributed, informational, opioid safety letter on chronic opioid use in a rural outpatient facility

Self-Assessment Questions:

1. Which is NOT associated with long-term opioid use? Choose all that apply.
 - a. Confusion
 - b. Nausea/vomiting
 - c. Tolerance
 - d. Decreased sensitivity to pain
 - e. Low testosterone
 - f. Physical dependence
2. Which opioid formulations are associated with an increased risk of opioid induced respiratory depression according to the RIOSORD scoring system?
 - a. OxyContin
 - b. Hydrocodone
 - c. Methadone
 - d. Both A and C
 - e. All of the above

Answers:

1. D
2. D

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XA - INFECTIOUS DISEASES/HIV

EVALUATING THE IMPACT OF OPIOIDS ON LENGTH OF STAY IN PATIENTS WITH *CLOSTRIDIUM DIFFICILE* INFECTIONS

Monica Do

Scott & White Medical Center – Temple
Temple, TX

Learning Objectives:

1. Identify weaknesses in the evidence surrounding the avoidance of anti-peristaltic agents in patients with *Clostridium difficile* infections.
2. Summarize the potential impact of opioids on *Clostridium difficile* infections.

Self-Assessment Questions:

1. Which of the following statements is true regarding the evidence surrounding the avoidance of anti-peristaltic agents in patients with *Clostridium difficile* infections?
 - a. There are no randomized controlled trials supporting the avoidance of anti-peristaltic agents.
 - b. There are case reports of patients with increased complication when treated with anti-peristaltic agents. However, these patients were either treated without antibiotics or antibiotics were administered late into their infection.
 - c. Based on poor/low-quality evidence, both the infectious Diseases Society of America and American College of Gastroenterology make recommendations to avoid anti-peristaltic agents
 - d. All of the above
 - e. B and C
2. Based on the study presented, opioid use in patients with *Clostridium difficile* infections potentially:
 - a. Increases length of stay
 - b. Decreases length of stay
 - c. Has no effect on length of stay

Answers:

1. D
2. C

**COMPARATIVE USE OF PIPERACILLIN/TAZOBACTAM VERSUS MEROPENEM IN
PATIENTS WITH SEPSIS SECONDARY TO PNEUMONIA REQUIRING EMPIRIC BROAD-
SPECTRUM COVERAGE**

Janel Liane Cala
Medical Center Hospital
Odessa, TX

Learning Objectives:

1. Evaluate whether patients presenting with sepsis secondary to pneumonia needs meropenem as empiric broad-spectrum therapy or if piperacillin/tazobactam would provide sufficient coverage in accordance to the patient's SOFA scoring upon hospital admission

Self-Assessment Questions:

1. For Hospital Acquired Pneumonia with patients who are not at high risk of mortality and no factors increasing the likelihood of MRSA, IDSA 2016 Guidelines recommend:
 - a. Piperacillin-tazobactam 4.5g IV q6h
 - b. Meropenem 1g q8h
 - c. Levofloxacin 750 mg IV daily
 - d. Any of the above
 - e. None of the above
2. There is currently no published studies comparing piperacillin/tazobactam versus meropenem as broad-spectrum empiric therapy in patients with sepsis secondary to pneumonia
 - a. True
 - b. False
3. Carbapenems are superior in terms of clinical outcomes and mortality benefit compared to piperacillin/tazobactam when used as empiric coverage in patients with sepsis secondary to pneumonia
 - a. True
 - b. False

Answers:

1. D
2. B
3. B

**RISK OF INFECTION IN PATIENTS RECEIVING SHORT VERSUS LONG DURATION OF
ANTIMICROBIAL PROPHYLAXIS IN NEUROSURGERY**

Chelsea Bast
Baylor University Medical Center
Dallas, TX

Learning Objectives:

1. Describe the evidence-based recommendations for antimicrobial prophylaxis in neurosurgery
2. List the potential complications associated with prolonged antimicrobial exposure

Self-Assessment Questions:

1. ASHP Therapeutic Guidelines for antimicrobial prophylaxis promote
 - a. Peri-procedural administration 60 minutes prior to surgery
 - b. Post-procedural administration 60 minutes after surgery
 - c. Total of 24 to 48 hours for patients undergoing CSF-shunting procedure
 - d. A & C
 - e. B & C
2. Potential complications associated with prolonged antimicrobial exposure include
 - a. *Clostridium difficile* infection
 - b. Multi-drug resistant organism infection
 - c. Medication-related toxicities
 - d. All of the above

Answers:

1. D
2. D

**EVALUATION OF ANTIBIOTIC USE IN URINARY TRACT INFECTIONS NOT REQUIRING
ADMISSION IN A COMMUNITY HOSPITAL EMERGENCY DEPARTMENT**

Desereé A. Reyna

Baylor Scott and White – All Saints Medical Center
Fort Worth, Texas

Learning Objectives:

1. To outline Urinary Tract Infection treatment guidelines
2. To evaluate uropathogen susceptibility to the prescribed empiric antibiotic
3. To improve empiric UTI prescribing practices in a community hospital emergency department

Self-Assessment Questions:

1. *Escherichia coli* is the most common pathogen associated with uncomplicated urinary tract infections
 - a. True
 - b. False
2. Which of the following antibiotics is not considered first line in uncomplicated urinary tract infections?
 - a. Trimethoprim-sulfamethoxazole
 - b. Cefuroxime
 - c. Nitrofurantoin
 - d. Ciprofloxacin
3. Which of the following is/are included in the black box warning for fluoroquinolones?
 - a. Tendinitis
 - b. Peripheral neuropathy
 - c. CNS effects
 - d. All of the above

Answers:

1. True
2. Ciprofloxacin
3. All of the above

IMPACT OF A PHARMACIST-DRIVEN PROBIOTIC PROTOCOL ON THE INCIDENCE OF ANTIBIOTIC- AND CLOSTRIDIUM DIFFICILE-ASSOCIATED DIARRHEA IN HOSPITALIZED PATIENTS RECEIVING ANTIBIOTIC THERAPY

Mona Kamali

Norman Regional Health System
Norman, OK

Learning Objectives:

1. Evaluate whether probiotics reduce the incidence of antibiotic- and Clostridium difficile-associated diarrhea in hospitalized patients on antibiotics
2. Describe the appropriate timing of probiotic initiation and duration for effective prevention of antibiotic- and Clostridium difficile-associated diarrhea in hospitalized patients on antibiotics

Self-Assessment Questions:

1. In the study by Gao, et al., a dose-response relationship was demonstrated as increased probiotic dosage resulted in a lower incidence of both AAD and CDAD.
 - a. True
 - b. False
2. According to the study by Shen, et al., when should probiotics be initiated in patients receiving antibiotics for effective prevention of *Clostridium difficile*-associated diarrhea?
 - a. Within 24 hours of the first antibiotic dose
 - b. Within 2 days of the first antibiotic dose
 - c. Within 3 days of the first antibiotic dose
 - d. Within 36 hours of the first antibiotic dose

Answers:

- 1) A
- 2) B

IMPACT OF SKIN TESTING FOR PENICILLIN ALLERGY IN SELF-REPORTED PENICILLIN ALLERGIC PATIENTS ON THE USE OF FLUOROQUINOLONES, CARBAPENEMS, AZTREONAM AND VANCOMYCIN IN A COMMUNITY HOSPITAL

Jaelyn Coffey

Norman Regional Hospital
Norman, Oklahoma

Learning Objectives:

1. Describe potential benefits of penicillin skin testing.
2. Identify patients that are ideal candidates for penicillin skin testing.

Self-Assessment Questions:

1. Potential benefits of penicillin skin testing include
 - a. Ability to use preferred antibiotics
 - b. Ability to use less expensive antibiotics
 - c. Ability to use antibiotics with fewer side effects
 - d. All of the above
2. An ideal candidate for penicillin skin testing has the following characteristic(s)
 - a. Anaphylaxis to penicillin 1 year ago
 - b. Reported allergy to ciprofloxacin
 - c. Reported rash to amoxicillin 15 years ago
 - d. Reported toxic epidermal necrolysis to penicillin

Answers:

1. D
2. C

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XB - INFECTIOUS DISEASES/HIV

**EVALUATION OF A NON-24 HOUR PILOT VANCOMYCIN PHARMACY PHARMACOKINETIC
CONSULT SERVICE**

Parna Haghparast
UTMB-CMC
Huntsville, TX

Learning Objectives:

1. Outline the benefits of a vancomycin consult service
2. Describe the development and implementation of a pharmacy pharmacokinetic service
3. Compare and contrast clinical outcomes of vancomycin therapy when it is being monitored by a pharmacy pharmacokinetic consult service versus unit providers

Self-Assessment Questions:

1. The Pharmacy Practice Summit (PPM) recommends against the implementation of a credentialing and privileging process that enables pharmacists to document interventions and write medication orders as part of a collaborative practice team
 - a. True
 - b. False
2. The vancomycin MUE conducted at UTMB-CMC showed that more than half the patients on vancomycin were
 - a. Dosed correctly
 - b. Under dosed
 - c. Over dosed
 - d. Renally dosed for normal creatinine clearance

Answers:

1. False
2. B

**CLINICAL OUTCOMES FOLLOWING INFECTIOUS DISEASES SOCIETY OF AMERICA (IDSA)
GUIDELINES FOR TREATMENT OF NEUTROPENIC FEVER IN CANCER PATIENTS**

Michelle Aguirre
Medical Center Hospital
Odessa, TX

Learning Objectives:

1. Define criteria for diagnosis of febrile neutropenia
2. Use an algorithm to guide treatment of febrile neutropenia in cancer patients
3. Analyze clinical outcomes following in-hospital treatment of febrile neutropenia

Self-Assessment Questions:

1. How is neutropenia defined by the 2010 IDSA Guidelines for Febrile Neutropenia in Cancer Patients?
 - a. ANC less than 500 neutrophils/mcL
 - b. ANC less than 1000 neutrophils/mcL
 - c. ANC less than 500 neutrophils/mcL or an ANC less than 1000 neutrophils/mcL and a predicted decline to 500 neutrophils/mcL or less over the next 48 hours
2. ANC less than 1000 neutrophils/mcL or an ANC less than 1500 neutrophils/mcL and a predicted decline to 1000 neutrophils/mcL or less over the next 48 hours
Based on 2010 IDSA guidelines, what is the recommended initial first-line therapy for high-risk patients requiring hospitalization for febrile neutropenia?
 - a. Monotherapy against gram-positives, including MRSA, because isolation of gram-positive organisms is more common than gram-negatives
 - b. Monotherapy with an antipseudomonal β -lactam agent due to high mortality rates associated with *Pseudomonas aeruginosa* infections
 - c. Dual therapy with an antipseudomonal β -lactam agent plus MRSA coverage due to high morbidity and mortality associated with febrile neutropenia in cancer patients
 - d. Antibiotics can be held until a documented source of infection is found

Answers:

1. C
2. B

**THERAPEUTIC DRUG MONITORING OF VANCOMYCIN AUC-24/MIC USING A TWO-SAMPLE
APPROACH IN OBESE PATIENTS TO REDUCE NEPHROTOXICITY**

Katherine M. Gallaga
CHRISTUS Spohn Health System
Corpus Christi, TX

Learning Objectives:

1. Recognize vancomycin-associated nephrotoxicity and acute kidney injury
2. Explain the altered pharmacokinetic properties of obese patients
3. Recognize the advantages of area under the curve in comparison to trough-only vancomycin therapeutic drug monitoring in obese patients

Self-Assessment Questions:

1. What is the best predictor of vancomycin activity?
 - a. Trough
 - b. Peak
 - c. AUC-24
 - d. AUC-24/MIC
2. What properties in obese patients alter the pharmacokinetic activity of vancomycin?
 - a. Increased clearance
 - b. Larger volume of distribution
 - c. Increased adipose and muscle mass
 - d. All of the above
3. How can AUC-24/MIC dosing provide a more accurate regimen for obese patients?
 - a. Lower trough concentration obtained
 - b. Improves target trough obtainment
 - c. Prevents unnecessary risk of toxicity
 - d. All of the above

Answers:

1. D
2. D
3. D

IMPLEMENTATION OF A CONTINUOUS INFUSION PIPERACILLIN-TAZOBACTAM PROTOCOL IN CRITICALLY ILL PATIENTS

Ethan George
University Health Shreveport
Shreveport, LA

Learning Objectives:

1. Explain the potential benefits of continuous-infusion beta-lactam antibiotics
2. Compare the costs of continuous infusion piperacillin-tazobactam to intermittent bolus piperacillin-tazobactam at a single academic medical center

Self-Assessment Questions:

1. Beta-lactam antibiotics display which type of bactericidal activity?
 - a. Concentration-dependent
 - b. Time-dependent
 - c. Dose-dependent
2. What is thought to be the benefit of giving piperacillin-tazobactam as a continuous infusion?
 - a. Provides more optimal antibiotic levels throughout the dosing interval
 - b. Saves money by giving less antibiotics per day
 - c. Allows us to give larger doses
 - d. A & B

Answers:

1. B
2. C

DE-ESCALATION OF EMPIRICALLY BROAD-SPECTRUM ANTIBIOTICS IN PNEUMONIA PATIENTS

Brittany Guillory

East Jefferson General Hospital
Metairie, Louisiana

Learning Objectives:

1. To describe appropriate de-escalation of broad spectrum antibiotics in pneumonia patients.
2. To identify adverse events that occurred due to inappropriate de-escalation.
3. To evaluate the effects of de-escalation on readmission rates.

Self-Assessment Questions:

1. Which of the following statement(s) follows the current definition of de-escalation according to the Institute for Safe Medication Practices (ISMP)?
 - a. Switching from a broad-spectrum antibiotic to a narrower antibiotic
 - b. Changing from dual therapy to monotherapy
 - c. Modifying antibiotics per culture and sensitivities
 - d. Switching therapy to a single broad-spectrum antibiotic
2. Which variable(s) in the study showed that de-escalation had better outcomes than the control?
 - a. Adverse Drug Reactions (ADRs)
 - b. Positive Culture
 - c. Comorbid Infection
 - d. ID Consult
3. The patients who experienced mortality while in the hospital were more likely to have been kept on broad-spectrum antibiotics.
 - a. True
 - b. False

Answers:

1. A, B
2. C, D
3. True

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XC - INFECTIOUS DISEASES/HIV

EXAMINATION OF MICROBIOLOGICAL AND TREATMENT DIFFERENCES OF EARLY-ONSET AND LATE-ONSET NEONATAL SEPSIS IN A NEONATAL INTENSIVE CARE UNIT

Sarah K Hayes

Methodist Hospital and Methodist Children's Hospital
San Antonio, TX

Learning Objectives:

1. Describe the symptoms, treatment, and typical duration of therapy for rule-out sepsis in neonates.
2. Identify the common causative organisms of neonatal sepsis.
3. Discuss the results of a single-center retrospective chart review as related to the time to culture positivity.

Self-Assessment Questions:

1. Sepsis is one of the leading causes of morbidity and mortality in neonates.
 - a. True
 - b. False
2. All of the following are common causes of late-onset neonatal sepsis EXCEPT:
 - a. *Escherichia coli*
 - b. Group B *Streptococcus*
 - c. Coagulase negative *Staphylococcus*
 - d. Herpes simplex virus
3. Which of the following antibiotic regimens would be appropriate for empiric treatment of early-onset sepsis?
 - a. Vancomycin and piperacillin-tazobactam
 - b. Ampicillin and gentamicin
 - c. Ampicillin and ceftriaxone
 - d. Vancomycin and gentamicin

Answers:

1. A. True
2. D. Herpes simplex virus
3. B. Ampicillin and gentamicin

BETA-LACTAM VERSUS FLUOROQUINOLONE THERAPY FOR TREATMENT OF STREPTOCOCCUS ANGINOSUS GROUP BACTEREMIA

Isaac J. Perales
University Health System
San Antonio, TX

Learning Objectives:

1. Outline literature surrounding *Streptococcus anginosus* group (SAG) bacteremia
2. Investigate the use of fluoroquinolones as step-down therapy for SAG bacteremia
3. Judge the role of fluoroquinolones as a treatment modality in the management of SAG bacteremia

Self-Assessment Questions:

1. What class of antibiotics has been historically used to treat *Streptococcus anginosus* group (SAG) bacteremia?
 - a. Fluoroquinolones
 - b. Macrolides
 - c. Beta-lactams
 - d. Tetracyclines
2. What is the current rationale recommending against the use of fluoroquinolones for SAG bacteremia?
 - a. Randomized controlled trials show decreased effectiveness of fluoroquinolones compared to beta-lactams
 - b. Fluoroquinolones demonstrate a low barrier to resistance
 - c. Increased incidence of *Clostridium difficile* infections
 - d. SAG are intrinsically resistant to fluoroquinolones
3. What is/are the potential benefit(s) of using fluoroquinolones as “step-down” therapy for SAG bacteremia?
 - a. Good bioavailability compared to oral beta-lactams
 - b. Circumvents the need for central line placement
 - c. Far superior side effect profile compared to beta-lactams
 - d. A and B

Answers:

1. C
2. B
3. D

**IMPACT OF A PHARMACIST-MANAGED INTRAVENOUS TO ORAL CONVERSION OF
ANTIMICROBIALS AT AN ACADEMIC MEDICAL CENTER**

Ashitha Jayachandran

UTMB Health

Galveston, TX

Learning Objectives:

1. Explain the significance of parenteral (IV) to oral (PO) medication conversion in the context of antimicrobial stewardship
2. Analyze the impact of a pharmacist-managed IV to PO antimicrobial conversion service at UTMB Health

Self-Assessment Questions:

1. Which of the following is true regarding PO administration in comparison to IV administration? (select all that apply)
 - a. Decreased cost
 - b. Increased cost
 - c. Ease of administration
 - d. Increased risk of infections
2. Which of the following antimicrobials were studied in this project? (select all that apply)
 - a. Ciprofloxacin
 - b. Levofloxacin
 - c. Azithromycin
 - d. Clarithromycin
 - e. Metronidazole
3. Which of the following is NOT an exclusion criteria?
 - a. Age \leq 18 years
 - b. Pregnant patients
 - c. Infectious Diseases consult
 - d. All of the above

Answers:

1. A&C
2. B,C,E
3. C

**OUTCOMES ANALYSIS IN PATIENTS WITH EXTENDED SPECTRUM BETA LACTAMASE
BACTEREMIA EMPIRICALLY TREATED WITH PIPERACILLIN/TAZOBACTAM VERSUS
CARBAPENEMS**

Reeba John

Baylor University Medical Center
Dallas, TX

Learning Objectives:

1. Explain the impact of the increasing incidence of ESBL infections with respect to patient outcomes and treatment options.
2. Describe the evidence for the use of piperacillin/tazobactam for the treatment of ESBL bacteremia.

Self-Assessment Questions:

1. ESBL infections are associated with...
 - a. Lower mortality due to the availability of carbapenems
 - b. Limited treatment options due to resistance mechanisms
 - c. Resistance mechanisms that are easily overcome with the addition of a beta-lactamase inhibitor
 - d. None of the above
2. Why does available literature not recommend BLBLI combinations for the treatment of ESBL infections?
 - a. Differences in outcomes based on the size of the inoculum for the infection
 - b. Organisms can produce multiple ESBL enzymes
 - c. Lack of strong clinical evidence indicating efficacy and/or mortality benefit
 - d. All of the above

Answers:

1. B
2. D

**IMPACT OF PHARMACIST-LED INITIATIVE TO INTEGRATE VERIGENE DIAGNOSTIC TESTS AND
ANTIMICROBIAL STEWARDSHIP**

Rose Cherian
CHRISTUS Spohn Health System
Corpus Christi, TX

Learning Objectives:

1. Explain the role of molecular diagnostic technologies involved in rapid identification of bacteria and antimicrobial stewardship
2. Identify potential advantages of having a dedicated pharmacist reviewing the results of Verigene® diagnostic tests

Self-Assessment Questions:

1. The Verigene System utilizes which of the following mechanisms for rapid identification of bacteria?
 - a. Mass spectrometry
 - b. Multiplex polymerase chain reaction
 - c. Nucleic acid hybridization
 - d. None of the above
2. Which of the following resistance markers are not paired correctly?
 - a. *mecA* – vancomycin resistance to *S. aureus*
 - b. CTX-M – extended spectrum β -lactamase producer
 - c. *vanA* – vancomycin resistance to *Enterobacter*
 - d. None of the above
3. Rapid bacterial identification technology used along with antimicrobial stewardship has shown which of the following outcomes?
 - a. Reduction in hospital length of stay
 - b. Decreased time to targeted antibiotics
 - c. Reduction in hospital costs
 - d. All of the above

Answers:

1. B
2. C
3. D

ASSESSMENT OF AN ANTIRETROVIRAL THERAPY POLICY IN PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV) AT A LARGE ACADEMIC MEDICAL CENTER

Elizabeth Barber

CHI St Luke's Health Baylor St Luke's Medical Center
Houston, TX

Learning Objectives:

1. Evaluate the effectiveness of the HIV medication restriction policy on the appropriateness of ART(antiretroviral therapy) re-ordering upon admission
2. Determine the difference in the time to restart of ART pre- and post-ART policy implementation
3. Compare the results of this study to your institution and formulate a strategy to improve the prescribing of ART at your institution

Self-Assessment Questions:

1. Lack of accurate medication reconciliation upon admission for HIV patients can lead to medication errors potentially leading to drug resistance and loss of treatment options
 - a. True
 - b. False
2. According to the findings of this study:
 - a. Appropriate medication reconciliation for HIV patients increased significantly after implementation of the HIV policy
 - b. Appropriate medication reconciliation for HIV patients decreased significantly after implementation of the HIV policy
 - c. There was no difference in the rate of appropriate medication reconciliation between both groups
 - d. None of the above
3. According to the findings of this study:
 - a. The mean time to re-initiation of ART decreased after implementation of the HIV policy
 - b. The mean time to re-initiation of ART increased after implementation of the HIV policy
 - c. There was no difference in the mean time to re-initiation of ART between both groups after implementation of the HIV policy
 - d. None of the above

Answers:

1. True
2. A
3. B

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIA - INFECTIOUS DISEASES/HIV

USE OF PROCALCITONIN IN THE PRESENCE OF FEBRILE NEUTROPENIA IN AUTOLOGUS BONE MARROW TRANSPLANT PATIENTS

Casey Stauffer
Methodist Hospital and Methodist Children's Hospital
San Antonio, TX

Learning Objectives:

1. Discuss the utility of procalcitonin in the presence of an infectious process
2. Discuss the use and duration of antibiotics in febrile neutropenia in bone marrow transplants
3. Discuss the results of a single center, retrospective chart review

Self-Assessment Questions:

1. Per the IDSA Guidelines, if a patient who is neutropenic and fevers, how long should antibiotics be continued if there are no positive cultures?
 - a. 2 weeks after fevers have resolved
 - b. 7-10 days after fevers have resolved
 - c. Until the patient's ANC exceeds 500 cells/mm³
 - d. None of the above
2. Procalcitonin can be utilized as a tool to determine if antimicrobials should be initiated or not.
 - a. True
 - b. False

Answers:

1. Until the patient's ANC exceeds 500 cells/mm³
2. False

THE SPICE OF LIFE: DOES POTENTIAL AMPC PRODUCTION IMPACT CLINICAL OUTCOMES

Charles J. Ulrich III
Methodist Dallas Medical Center
Dallas, Texas

Learning Objectives:

1. To explain the mechanism of antimicrobial resistance posed by AmpC-producing organisms
2. To compare clinical outcomes between patients treated with standard therapy and non-standard therapy for bloodstream infections due to potential AmpC-producing organisms

Self-Assessment Questions:

1. Which of the following is the resistance mechanism associated with AmpC production?
 - a. Efflux pump
 - b. Beta-lactamase
 - c. Porin loss
 - d. Biofilm production
 - e. Altered target site
2. Which of the following agents might be of concern when considering treatment of a bloodstream infection with a potential AmpC-producing organism?
 - a. Ceftazidime
 - b. Cefepime
 - c. Ciprofloxacin
 - d. Ceftriaxone
 - e. A and D

Answers:

1. B
2. E

**EVALUATE THE APPROPRIATENESS OF *CLOSTRIDIUM DIFFICILE* INFECTION TREATMENT
BASED ON INFECTIOUS DISEASE SOCIETY OF AMERICA GUIDELINES AT DOCTORS
HOSPITAL AT RENAISSANCE**

Sara L Solomon
Doctors Hospital at Renaissance
Edinburg, TX

Learning Objectives:

1. Describe the potential benefits of guideline adherence on patients outcomes
2. Identify the impact of noncompliance of guideline at a health system
3. Compare strategies to improve guidelines adherence at a health system

Self-Assessment Questions:

1. Based on the 2018 updated clostridium difficile IDSA guidelines, which regimen has a strong recommendation as first line therapy for initial non-severe episode in an adult patient?
 - a. Metronidazole 500mg PO TID
 - b. Vancomycin 125 mg PO QID
 - c. Fidaxomicin 200 mg PO BID
 - d. a and b
 - e. b and c

Answer: e

2. How long after cessation of antibiotics are patients still at increased risk of a *clostridium difficile* infection?
 - a. 2 weeks
 - b. 1 month
 - c. 3 months
 - d. 6 months

Answer: c

3. Which item below does not represent an antimicrobial stewardship intervention in a health system to help control *clostridium difficile* infection rates?
 - a. Minimize the frequency and duration of high risk antibiotic therapy
 - b. Minimize the number of antibiotics agents prescribed
 - c. Restrict high risk antibiotics such as fluoroquinolones, clindamycin, and cephalosporins
 - d. Recommend probiotics for primary prevention

Answer: d

**STANDARD VS ALTERNATIVE THERAPY FOR STENOTROPHOMONAS MALTOPHILIA
INFECTIONS: FOCUS ON TRIMETHOPRIM-SULFAMETHOXAZOLE, MINOCYCLINE, AND
MOXIFLOXACIN MONOTHERAPY**

Jasmin Badwal
University Health System
San Antonio, Texas

Learning Objectives:

1. Identify current difficulties in diagnosis and treatment of *S. maltophilia* infections
2. Evaluate differences in clinical success and safety outcomes when treated with trimethoprim-sulfamethoxazole, minocycline, or moxifloxacin
3. Justify place in therapy of studied agents in management of *S. maltophilia* infections

Self-Assessment Questions:

1. *S. maltophilia* is a nosocomial pathogen commonly associated with pneumonia and skin and soft tissue infections, however can often present as a colonizer
 - a. True
 - b. False
2. Which of the following does not have activity against *S. maltophilia*?
 - a. Trimethoprim-sulfamethoxazole
 - b. Minocycline
 - c. Cefepime
 - d. Meropenem
 - e. Moxifloxacin

Answers:

1. A
2. D

EVALUATION OF A PHARMACIST-DRIVEN ALLERGY ASSESSMENT SERVICE ON EXPOSURE TO NON-PREFERRED ANTIBIOTICS IN PATIENTS WITH A DOCUMENTED BETA-LACTAM ALLERGY

Brittany Monene

CHRISTUS Trinity Mother Frances Health System
Tyler, Texas

Learning Objectives:

1. Outline concerns regarding beta-lactam allergy labeling and the relationship to clinical outcomes in the hospital setting
2. Identify structured drug allergy assessments as a valuable antibiotic stewardship tool
3. Demonstrate the impact of implementing a pharmacist-driven allergy assessment service at our institution

Self-Assessment Questions:

1. Patients admitted to the hospital with a beta-lactam allergy label have worse clinical outcomes. These include a higher likelihood of which of the following:
 - a. Longer hospital stay
 - b. Acquisition of *C. difficile*, vancomycin-resistant *Enterococcus* (VRE), and methicillin-resistant *S. aureus* (MRSA) infections
 - c. Treatment with an alternative antibiotic such as fluoroquinolones, vancomycin, and clindamycin
 - d. B and C
 - e. All of the above
2. Penicillin allergies are the most common drug allergy listed during hospital admission. What percent of patients, after being evaluated, are found to be penicillin and cephalosporin tolerant?
 - a. 15%
 - b. 100%
 - c. > 95%
 - d. 80%
3. Approximately ___% of patients with an IgE-mediated penicillin allergy lose their sensitivity after ___ years.
 - a. 80%; 10 years
 - b. 15%; 95 years
 - c. 10%; 10 years
 - d. 50%; 1 year

Answers:

1. E
2. C
3. A

**IMPROVING THE APPROPRIATENESS OF PRE-OPERATIVE ANTIBIOTIC PROPHYLAXIS IN
PATIENTS UNDERGOING PROCEDURES BY INTERVENTIONAL RADIOLOGY AT A
COMPREHENSIVE CANCER CENTER**

Patrick J. Hoheisel

The University of Texas MD Anderson Cancer Center
Houston, TX

Learning Objectives:

1. Explain the purpose of antibiotic prophylaxis in patients receiving percutaneous nephrostomy (PCN) tubes
2. Describe the appropriate administration instructions of prophylactic ciprofloxacin
3. Identify the risk factors for post-operative infection from PCN placement or exchange

Self-Assessment Questions:

1. What is the purpose of administering pre-operative antibiotics in patients undergoing percutaneous nephrostomy (PCN) placement or exchange?
 - a. To decrease rates of bacterial resistance
 - b. To treat pre-operative infections
 - c. To prevent post-operative infections
2. What is the appropriate administration instructions of intravenous ciprofloxacin?
 - a. Infusion initiated 30 minutes before incision
 - b. Infusion initiated 60-120 minutes before incision
 - c. Infusion initiated anytime pre- or post-incision
3. What is a risk factor for post-operative infection from PCN placement or exchange in cancer patients?
 - a. Diabetes
 - b. Age < 65
 - c. Male gender

Answers:

1. c
2. b
3. a

UTILIZATION OF A CLINICAL DECISION TREE TO PREDICT EXTENDED-SPECTRUM BETA-LACTAMASE PRODUCING ORGANISMS IN BACTEREMIC PATIENTS AT A VETERAN AFFAIRS TEACHING HOSPITAL

DeMaurian M. Mitchner

Michael E. DeBakey Veterans Affairs Medical Center
Houston, TX

Learning Objectives:

1. Utilize a clinical decision tree to predict whether patients have bacteremia due to an ESBL-producing organism.
2. Evaluate provider prescribing practices among the emergency department and primary care team prior to confirmation of bacteremia due to an ESBL-producing organism.

Self-Assessment Questions:

1. Extended-spectrum beta-lactamases (ESBL) can hydrolyze most broad-spectrum beta-lactam antibiotics, with the expectation of carbapenems.
 - a. True
 - b. False
2. Which of the following exposures are shown to be independently associated with extended-spectrum beta-lactamases (ESBL) producing organisms?
 - a. Previous antibiotic therapy
 - b. Presence of indwelling urinary catheter
 - c. Advanced age
 - d. All of the above

Answers:

1. a (True)
2. d (All of the above)

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIB - INFECTIOUS DISEASES/HIV

**PROBIOTICS FOR THE PREVENTION OF ANTIBIOTIC ASSOCIATED CLOSTRIDIUM DIFFICILE
INFECTIONS**

Joshua Sanchez

Baptist St. Anthony's Health System
Amarillo, TX

Learning Objectives:

1. Participants will be able to evaluate the usage of probiotics for *C. diff* prophylaxis in a hospital inpatient setting.
2. Participants will be able to identify prophylactic measures to prevent hospital acquired *C. diff* infections.
3. Participants will be able to formulate plans for the implementation of probiotics for *C. diff* prophylaxis.

Self-Assessment Questions:

- 1) *Clostridium difficile* is a:
 - a) spore-forming, Gram-positive anaerobic bacteria
 - b) spore-forming, Gram-negative aerobic bacteria
 - c) Atypical bacteria
 - d) Virus
- 2) Which of these antibiotics are commonly associated with CDAD?
 - a) Levofloxacin
 - b) Augmentin
 - c) Clindamycin
 - d) All of the above
- 3) What role do probiotics have in the prevention of *C. diff* infections?
 - a) Restore normal flora
 - b) Bind toxin A and B
 - c) Kill *Clostridium* species
 - d) Stabilize the gut wall
- 4) When implementing a probiotic protocol it is important to:
 - a) Define parameters for use
 - b) Inform medical staff before implementation
 - c) Research and provide data to support the product selection
 - d) All of the above

Answers:

- 1) A
- 2) D
- 3) A
- 4) D

CLINICAL AND ECONOMIC IMPACT OF RAPID BLOOD CULTURE IDENTIFICATION WITH REAL-TIME ANTIMICROBIAL STEWARDSHIP IN PATIENTS WITH STAPHYLOCOCCUS AUREUS AND ENTEROCOCCUS SPP. BACTEREMIA AT A LARGE ACADEMIC MEDICAL CENTER

Jessica Hirase

CHI St Luke's Health Baylor St Luke's Medical Center
Houston, TX

Learning Objectives:

1. Discuss the importance of timely identification of the pathogen in initiating appropriate antimicrobial therapy
2. Compare the clinical and economic impact of rapid blood culture identification versus standard blood culture processing, both coupled with real-time antimicrobial stewardship, in patients with Staphylococcus aureus and Enterococcus spp. bacteremia

Self-Assessment Questions:

1. Which of the following resistance genes on the BCID panel is associated with carbapenem resistance?
 - a. MecA
 - b. VanA
 - c. KPC
 - d. VanB
2. According to the findings of this study:
 - a. The mean time to optimal therapy decreased significantly after implementation of rapid BCID testing.
 - b. The mean time to active therapy decreased significantly after implementation of rapid BCID testing.
 - c. The mean time to identification of the pathogen decreased significantly after implementation of rapid BCID testing.
 - d. A and C
3. According to the findings of this study, time to optimal therapy was significantly shorter in patients with:
 - a. MRSA and VSE bacteremia.
 - b. MRSA and VRE bacteremia
 - c. MSSA and VRE bacteremia.
 - d. MSSA and VSE bacteremia

Answers:

1. C
2. D
3. C

**ANALYSIS OF MULTIDRUG-RESISTANT PSEUDOMONAS AERUGINOSA MANAGEMENT AT
BAPTIST HEALTH SYSTEM**

Kyle O. Starling
Baptist Health System
San Antonio, TX

Learning Objectives:

1. Identify areas for improving management of multi-drug resistant pseudomonas infections at their local facility
2. Analyze their own data to increase positive outcomes.

Self-Assessment Questions:

1. Which of the following are goals of antimicrobial stewardship?
 - a. Achieve optimal clinical outcomes
 - b. Reduce costs
 - c. Reduce toxicity
 - d. Limit selection of resistant bacterial strains
 - e. All of the above
2. Antibiotics are a communal resource.
 - a. True
 - b. False

Answers:

1. e.
2. a.

**TREATMENT OF METHICILLIN-SUSCEPTIBLE STAPHYLOCOCCUS AUREUS (MSSA) BACTEREMIA
AT BAPTIST HEALTH SYSTEM (BHS)**

Gabrielle Uzzell
Baptist Health System
San Antonio, TX

Learning Objectives:

1. Question antibiotic choice based on various patient specific factors
2. Evaluate the appropriateness of one antibiotic choice over another
3. Identify potential indicators of treatment failure

Self-Assessment Questions:

- 1) When choosing definitive therapy for a patient with blood culture positive for MSSA, vancomycin is a reasonable choice?
 - a. True
 - b. False
- 2) For empiric therapy for a bacteremic patient, in addition to vancomycin, what antibiotic is most commonly prescribed?
 - a. Ceftriaxone
 - b. Piperacillin/tazobactam
 - c. Meropenem
 - d. Cefazolin
- 3) What is the most common pathogen seen in bacteremias?
 - a. Pseudomonas
 - b. Streptococcus
 - c. E. Coli
 - d. Staphylococcus aureus

Answers:

- 1) False
- 2) B
- 3) D

EVALUATING THE IMPACT OF PROCALCITONIN ON ANTIBIOTIC UTILIZATION IN COPD EXACERBATIONS

Kevin Lin

Memorial Hermann Southwest Hospital
Houston, TX

Learning Objectives:

1. Explain the utility of obtaining procalcitonin levels in patients with COPD exacerbations
2. Define appropriate criteria to guide antibiotic decision-making in COPD exacerbations
3. Devise a protocol to improve antibiotic stewardship when treating COPD exacerbations

Self-Assessment Questions:

1. About ___ of COPD exacerbations are due to infectious causes, and the majority are _____ in nature.
 - a. 75%, viral
 - b. 75%, bacterial
 - c. 50%, viral
 - d. 50%, bacterial
2. Procalcitonin elevations can be seen in patients presenting with which of the following?
 - a. Bacterial infections
 - b. Viral infections
 - c. Fungal infections
 - d. Psoriasis

Answers:

1. C
2. A

**QUALITY IMPROVEMENT GAP ANALYSIS OF ANTIBIOTIC USE IN PEDIATRIC PATIENTS WITH
COMMUNITY ACQUIRED PNEUMONIA**

Helen Leung

Children's Memorial Hermann Hospital
Houston, TX

Learning Objectives:

1. List narrow-spectrum antibiotics recommended for uncomplicated community acquired pneumonia in the pediatric population
2. Describe knowledge barriers for the use of the Pediatric Community Acquired Pneumonia Medical Power Plan by pediatric medical residents
3. Discuss the ability of prescriber-directed education to increase the use of narrow-spectrum antibiotics for the treatment of uncomplicated community acquired pneumonia in the pediatric population

Self-Assessment Questions:

1. Which narrow spectrum antibiotics are first-line therapy for uncomplicated pediatric community acquired pneumonia?
 - a. Ceftriaxone
 - b. Azithromycin
 - c. Penicillin
 - d. Ampicillin
 - e. C and D
2. What are some knowledge barriers for the use of the pediatric community acquired pneumonia (CAP) order set by pediatric medical residents?
 - a. Residents are unaware that a CAP order set exists
 - b. Residents forget to use the CAP order set
 - c. There is a misconception that all patients admitted to the hospital are considered complicated CAP
 - d. All of the above

Answers:

1. E
2. D

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIC - TRANSITIONS OF CARE

IMPACT OF PHARMACIST-DELIVERED TELEPHONE EDUCATION TO PATIENTS DISCHARGED ON RIVAROXABAN AND SUBSEQUENT ER VISITS

Lauren Bailey
Harris Health System
Houston, TX

Learning Objectives:

1. To identify the impact of a pharmacist-delivered post-hospital discharge telephone education program on bleeding events in patients prescribed rivaroxaban
2. To compare the number of bleeding hospitalizations for patients who received telephone education to those who did not receive telephone education
3. To detect any potential cost savings of the education program

Self-Assessment Questions:

1. According to the 2016 CHEST guidelines, which anticoagulant is recommended for the treatment of venous thromboembolism in non-cancer patients?
 - A. Warfarin
 - B. Apixaban
 - C. Enoxaparin
 - D. Heparin
2. Which of the following is FALSE concerning rivaroxaban?
 - A. Does not need to be renally dose adjusted
 - B. Requires routine INR monitoring
 - C. Has a specific antidote available
 - D. All of the above
3. Effective patient education can lead to better health outcomes such as a reduction in hospital readmission rates.
 - A. True
 - B. False

Answers:

1. B
2. D
3. A

IMPACT OF DISPENSING DISCHARGE MEDICATIONS TO PATIENTS WITH HEART FAILURE, ACUTE MYOCARDIAL INFARCTION, OR CHRONIC OBSTRUCTIVE PULMONARY DISEASE EXACERBATION: EFFECT ON 30-DAY ALL-CAUSE READMISSION RATES

Kajia Zheng

Scott and White Medical Center – Temple
Temple, TX

Learning Objectives:

1. Identify causes of medication non-adherence.
2. Discuss the impact of bedside delivery programs on improving readmission rates.

Self-Assessment Questions:

1. Which of the following are causes of medication non-adherence?
 - A. Conforming, fulfillment, persistence
 - B. Conforming, non-fulfillment, persistence
 - C. Non-conforming, non-fulfillment, non-persistence
 - D. Non-conforming, fulfillment, non-persistence
2. Bedside delivery has shown benefit in which of the following?
 - A. Decreased medication compliance
 - B. Decreased re-admission rates
 - C. Increased morbidity and mortality
 - D. Increased healthcare costs

Answers:

1. C
2. B

THE IMPACT OF AMBULATORY CARE PHARMACIST-LED TRANSITIONS OF CARE SERVICES ON HOSPITAL READMISSION RATES

Kathleen Eddy

Baylor Health Enterprises Community Pharmacy Residency
Dallas, Texas

Learning Objectives:

1. Assess the impact of pharmacist-led transitions of care services in the ambulatory care setting on hospital readmissions.
2. Identify opportunities where ambulatory care pharmacists can make clinical interventions in transitions of care.
3. Describe the workflow of pharmacist-led transitions of care services at outpatient charity clinics.

Self-Assessment Questions:

1. Pharmacist-led transitions of care services in the ambulatory care setting decrease 30-day all-cause hospital readmission rates.
 - a. True
 - b. False
2. What aspect(s) contributed to the standardization of transitions of care services at outpatient charity clinics included in this study?
 - a. Standardized follow-up times
 - b. Pre-populated Smart Text in EPIC
 - c. Only face-to-face encounters were included in the workflow; Telephonic encounters were excluded
 - d. A and B
 - e. All of the above

Answers:

1. B (*anticipated answer; results pending but will be available upon presentation*)
2. D

PHARMACIST-DIRECTED POST-ACUTE TRANSITION OF CARE TO DECREASE READMISSION RATES FOR HIGH RISK PATIENTS

Chelsea Garcia
Chickasaw Nation Medical Center
Ada, OK

Learning Objectives:

1. Identify common chronic disease states associated with hospital readmissions
2. Assess the role of the pharmacist in an interdisciplinary healthcare team for providing transition of care targeting medication reconciliation, errors, and education
3. Describe activities a transition of care pharmacist can perform to reduce readmissions

Self-Assessment Questions:

1. Chronic disease states account for what percentage of hospital admissions?
 - a. 91%
 - b. 95%
 - c. 81%
 - d. 85%
2. Which of the following is not a disease state included in the project?
 - a. Type 1 diabetes mellitus
 - b. Asthma
 - c. Sepsis
 - d. Cirrhosis
 - e. a and b
 - f. c and d
3. True or False. Up to 30% of patients fail to fill first-time medications after hospitalization.

**THE IMPACT OF PHARMACY TEAM INVOLVEMENT ON READMISSION DUE TO MEDICATION
RELATED EVENTS**

Heather Savage
Ochsner Medical Center
New Orleans, Louisiana

Learning Objectives:

1. Explain the Pharmaceutical Care Network Europe (PCNE) Classification of Drug Related Problems and its usefulness in both practice and research
2. Compare and contrast pharmacist interventions in a hospital setting
3. Demonstrate the value of a pharmacy driven medication reconciliation service

Self-Assessment Questions:

1. What is the Pharmaceutical Care Network Europe (PCNE) classification system?
 - a. A way to measure insurance coverage for pharmaceuticals
 - b. A system used in research to determine the nature, prevalence and incidence of drug related problems
 - c. A system being implemented in hospitals to categorize pharmaceutical processes
 - d. A way to classify patients as high risk for readmission
2. Which of the following best defines medication reconciliation?
 - a. Completing and documenting a medication history
 - b. Counseling the patient on home medications
 - c. Compiling the most up to date list of medications and comparing it to current orders
 - d. Calling the patient's pharmacy to determine what medications the patient has filled in the last year
3. Which of the following is considered a value of pharmacist involvement in medication reconciliation?
 - a. Decreased readmissions due to drug related problems
 - b. Increased costs to hospitals
 - c. Increased medication errors compared to physician or nurse completed medication reconciliation
 - d. Decreased identification of allergies

Answers:

1. B
2. C
3. A

THE IMPACT OF BEDSIDE MEDICATION DELIVERY ON HOSPITAL CONSUMER ASSESSMENT OF HEALTHCARE PROVIDERS AND SYSTEMS (HCAHPS) SURVEYS

Brandi K. Dahl

Texas Tech University School of Pharmacy
Amarillo, TX

Learning Objectives:

1. Describe the impact the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey on hospital reimbursement through value-based purchasing.
2. List the questions on the HCAHPS survey which may be influenced by a discharge bedside medication delivery service including the transition of care domain and overall hospital ratings.
3. Evaluate the impact of bedside medication delivery at discharge on patient HCAHPS survey results.

Self-Assessment Questions:

1. Which statement most accurately describes hospital value-based purchasing?
 - a. Hospitals are incentivized based on the quantity of services provided under hospital value-based purchasing
 - b. Patient satisfaction is accounted for under the clinical care domain
 - c. The four major domains are each weighted at 25% for fiscal year 2018 and subsequent years
 - d. The general public cannot use HCAHPS data to compare hospitals
2. Hospital value-based purchasing is funded through a 2% reduction in hospitals' base operating Medicare Severity Diagnosis Related Group (MS-DRG) payments?
 - a. True
 - b. False
3. Which HCAHPS domains contain questions specifically about medications?
 - a. Communication About Medicines
 - b. Care Transition
 - c. Communication With Doctors
 - d. Both A and B

Answers:

1. C
2. A
3. D

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIII A - INTERNAL MEDICINE/PHARMACOTHERAPY

**AN EVALUATION OF INTERPROFESSIONAL NAVIGATION SERVICES IN HIGH UTILIZERS AT A
COUNTY TERTIARY TEACHING HEALTH SYSTEM**

Taylor Horyna

Texas Tech University Health Sciences Center
Lubbock, Texas

Learning Objectives:

1. Define the patient navigation program and the role in patient care at University Medical Center in Lubbock, Texas
2. Identify the effect of interprofessional navigation in high utilizers and frequency of in-patient services based on hospital-based utilization, a composite of ED visits and hospital admissions, hospital admissions, and ED visits.

Self-Assessment Questions:

1. TTUHSC Project 2.9.1 is comprised of:
 - a. School of Medicine
 - b. School of Nursing
 - c. 4 Patient Navigators
 - d. Data Coordinator
 - e. All of the above
2. All of the following are criteria for referral into the patient navigation program except:
 - a. Three or more hospital visits in one year
 - b. One or more 30-day readmissions
 - c. Diagnosis of cancer
 - d. No primary care provider
 - e. Three or more ER visits in one year
3. In this study, utilization is defined by hospital admissions, ED visits, and a composite of both.
 - a. True
 - b. False

Answers:

E
C
True

EVALUATION OF APIXABAN USE IN PATIENTS WITH RENAL DYSFUNCTION FOR VENOUS THROMBOEMBOLISM AND ATRIAL FIBRILLATION

Pamela Carter
JPS Health Network
Fort Worth, TX

Learning Objectives:

1. Distinguish the current gaps in literature surrounding apixaban use in patients with renal dysfunction
2. Evaluate the incidence of bleeding in patients with renal dysfunction on apixaban

Self-Assessment Questions:

1. Currently, there are no published randomized controlled trials evaluating the safety of apixaban's use in patients with renal dysfunction.
 - a. True
 - b. False
2. Clinical trials comparing the use of apixaban to warfarin in patients for the prevention of stroke in atrial fibrillation or the treatment of venous thromboembolism excluded which patient population?
 - a. Patients with a creatinine clearance < 25 mL/min
 - b. Patients requiring hemodialysis
 - c. A and B

Answers:

1. A
2. C

EFFECT OF DAILY LOW-DOSE VITAMIN K SUPPLEMENTATION ON INTERNATIONAL NORMALIZED RATIO (INR) STABILITY IN PATIENTS TAKING WARFARIN

Hannah Ehrenfeld
Scott & White Medical Center – Temple
Temple, TX

Learning Objectives:

1. Describe the theory behind the concomitant use of daily, low-dose vitamin K supplementation and warfarin on INR stabilization.
2. Discuss the impact daily, low-dose vitamin K has on time in therapeutic range (TTR) after reviewing data.

Self-Assessment Questions:

- 1) Which of the following statements best describes the theory of adding vitamin K supplementation to patients anticoagulated with warfarin?
Daily vitamin K supplementation _____.
 - a. Enhances the body's ability to make its own vitamin K, resulting in an overall stabilized INR
 - b. Creates a baseline "pool" of vitamin K in the body, reducing the magnitude of effect of outside fluctuations on INR.
 - c. Binds up excess warfarin in the body preventing supra-therapeutic INRs.
 - d. Supports overall nutritional wellness, resulting in stabilized INRs.
- 2) Based on this study, which of the following statements best describes the impact daily vitamin K supplementation has on INR time in therapeutic range?
 - a. Vitamin K supplementation decreased time in therapeutic range compared to non-supplementation
 - b. Vitamin K supplementation increased time in therapeutic range compared in non-supplementation
 - c. There was no significant difference in time in therapeutic range between the supplemented and non-supplemented groups

RETROSPECTIVE ANALYSIS OF ASPIRIN VERSUS NON-ASPIRIN THERAPY FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM IN PATIENTS WHO HAVE UNDERGONE A TOTAL HIP OR KNEE ARTHROPLASTY

Nicole Dominguez
Scott & White Medical Center
Temple, TX

Learning Objectives:

1. Describe current guideline recommendations for venous thromboembolism (VTE) prevention in patients that have had a recent total knee replacement (TKR) or total hip replacement (THR).
2. Identify challenges associated with VTE prevention in TKR and THR patients.

Self-Assessment Questions:

1. According to the CHEST guidelines, what is the preferred agent for VTE prophylaxis post TKA or THA?
 - a. LMWH
 - b. Warfarin
 - c. Aspirin
 - d. None of the above
2. What are potential barriers/issues associated with prescribing VTE prophylaxis in patients that have undergone a TKA or THA?
 - a. Cost
 - b. Ease of administration
 - c. Bleeding risk
 - d. Lack of guideline consensus
 - e. All of the above

Answers:

1. A
2. E

ANGIOMAX VERSUS HEPARIN: WHAT'S THE RISK?

Vida Haddad

Baptist St. Anthony's Hospital
Amarillo, TX

Learning Objectives:

1. Describe how the NCDR tool risk stratifies patients' bleeding risks undergoing percutaneous coronary intervention (PCI).
2. Develop a risk stratification tool based on literature to ensure appropriate anticoagulation management in PCI.

Self-Assessment Questions:

1. Name a variable that is *not* included in the the NCDR CathPCI Bleeding Risk Score
 - a. Age
 - b. Weight
 - c. Platelets
 - d. Hemoglobin
2. A patient undergoing PCI was scored prior to the procedure using the the NCDR CathPCI Bleeding Risk Score to assess their risk of bleeding. The patient's NCDR bleeding risk score is 20, which is considered _____ risk of bleeding.
 - a. Low
 - b. Medium
 - c. High
 - d. Average

Answers:

1. C
2. A

**ASSESSING THE USE OF ASPIRIN FOR PRIMARY PREVENTION OF SECOND GENERATION
ANTIPSYCHOTIC INDUCED CARDIOVASCULAR AND CEREBROVASCULAR RELATED
MORTALITY RISKS**

Ife-atu Anachebe

VA North Texas Health Care System
Dallas, TX

Learning Objectives:

1. Determine whether the use of aspirin is appropriate for primary prevention of cardiovascular events in patients using second-generation antipsychotics.
2. Identify risk factors associated with cardiovascular events based on antipsychotic use.

Self-Assessment Questions:

1. Among the second generation antipsychotics listed below, which of the following has the most risk for metabolic syndrome?
 - A. Aripiprazole
 - B. Lurasidone
 - C. Olanzapine
 - D. Ziprasidone
2. Which of the following groups of patients have the highest level of evidence for the use of aspirin for primary prevention of cardiovascular disease?
 - A. Patients 50 – 59 years with $\geq 10\%$ 10-year CVD risk
 - B. Patients 60 – 69 years with $\geq 10\%$ 10-year CVD risk
 - C. Patients < 50 years
3. Which of the following are reasons why using aspirin may be beneficial in patients on second-generation antipsychotics?
 - A. Patients with severe mental illness have a higher risk of developing cardiovascular disease
 - B. Higher risk of cardiovascular mortality associated with the use of antipsychotics
 - C. Metabolic syndrome may increase the risk of cardiovascular events
 - D. All of the above

Answers:

1. C
2. A
3. D

**TRANSITIONS OF CARE: THE IMPACT OF PHARMACISTS
ON READMISSION RATES IN PCI PATIENTS**

Michael Romero
Baptist Saint Anthony's Hospital
Amarillo, Texas

Learning Objectives:

1. Identify patient's that would benefit from the addition of P2Y12 inhibitors.
2. Implement a transition of care P2Y12 program similar to Baptist Saint Anthony's.

Self-Assessment Questions:

1. Which of the following is a P2Y12 inhibitor?
 - a. clopidogrel
 - b. prasugrel
 - c. ticagrelor
 - d. cangrelor
 - e. All of the above
2. True or false Plavix is the only once daily oral P2Y12 inhibitor?
 - a. True
 - b. False
3. According to ACC/AHA 2016 guideline update how long should a P2Y12 inhibitor be continued in patients with stable ischemic heart disease who had drug-eluting stent placed?
 - a. At least 1 month
 - b. At least 6 months
 - c. At least 12 months
 - d. Indefinitely

Answers:

1. All of the above
2. False
3. At least 6 months

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIIB - INTERNAL MEDICINE/PHARMACOTHERAPY

EVALUATION OF THE EFFICACY OF DIRECT ORAL ANTICOAGULANTS (DOACS) IN COMPARISON TO WARFARIN IN MORBIDLY OBESE PATIENTS

Charlene Kalani
Corpus Christi Medical Center
Corpus Christi, Texas

Learning Objectives:

1. To identify shortcomings in evidence supporting direct oral anticoagulants (DOAC) use in the morbidly obese population
2. To describe the results of the “Evaluation of the Efficacy of Direct Oral Anticoagulants (DOACs) in Comparison to Warfarin in Morbidly Obese Patients” study

Self-Assessment Questions:

1. Which are major limitations in prescribing direct oral anticoagulants (DOACs) in morbidly obese patients?
 - a. Poor enrollment in landmark, phase-3 efficacy and safety trials
 - b. Limited number of pharmacokinetic studies evaluating efficacy and safety
 - c. International Society on Thrombosis and Hemostasis (ISTH) guidelines not recommending use of DOACs in morbidly obese patients
 - d. All of the above
2. If a patient refuses to be on warfarin anticoagulation, has labile INRs, or develops jaundice, anaphylaxis, or a hypersensitivity reaction to treatment, which agents are preferred based on limited available data?
 - a. Apixaban
 - b. Dabigatran
 - c. Rivaroxaban
 - d. A and C

Answers:

1. D
2. D

THE EFFECT OF PHARMACY EDUCATION ON VERIFYING HEPARIN DOSING WEIGHTS IN OBESE PATIENTS POST PHARMACY SKILLS FAIR

Brent Kitto
Ochsner Medical Center
New Orleans, Louisiana

Learning Objectives:

1. To analyze the impact of pharmacist education on order verification.
2. To evaluate the use of adjusted body weight for heparin infusions in obese patients.

Self-Assessment Questions:

1. According to the preliminary results of this study, using actual body weight in obese patients resulted in _____.
 - a. Increased sub-therapeutic anti-Xa levels in comparison to adjusted body weight
 - b. Increased supra-therapeutic anti-Xa levels in comparison to adjusted body weight
 - c. Increased time to therapeutic range in comparison to adjusted body weight
 - d. Both B and C
2. Pharmacy education positively impacted verification rates of adjusted body weight dosed heparin infusions in obese patients post intervention.
 - a. True
 - b. False

Answers:

1. D
2. A

**AMANTADINE VERSUS MODAFINIL FOR THE TREATMENT OF TRAUMATIC BRAIN
INJURY ASSOCIATED SLEEP-WAKE DISTURBANCES**

RimMekonnen Hadgu

Xavier University of Louisiana College of Pharmacy and University Medical Center New Orleans
New Orleans, LA

Learning Objectives:

1. Identify potential complications of a traumatic brain injury (TBI)
2. Evaluate the literature regarding the use of amantadine and modafinil for TBI induced sleep-wake disturbances
3. Compare amantadine and modafinil for improved wakefulness at 72 hours.

Self-Assessment Questions:

1. What is the proposed mechanism of decreased wakefulness in patients with a traumatic brain injury (TBI)?
 - a. Increased norepinephrine levels leading to decreased cognitive function
 - b. **Dopamine depletion secondary to catecholamine surge**
 - c. Hyperactive electrical activity of the brain leading to fatigue
 - d. All of the above
2. What is the proposed mechanism of increasing alertness in patients with TBI using amantadine?
 - a. **Increasing dopamine by blocking NMDA receptors and acting as a dopamine receptor agonist**
 - b. Decreasing dopamine levels by binding to agonizing NMDA receptors and acting as a dopamine receptor antagonist
 - c. Increasing GABA-ergic transmission in the brain
 - d. Reducing extrapyramidal symptoms

ENOXAPARIN VERSUS CONTINUOUS HEPARIN FOR PERIPROCEDURAL BRIDGING IN ATRIAL FIBRILLATION PATIENTS WITH ADVANCED CHRONIC KIDNEY DISEASE

Chandler D. Schexnayder

Michael E. DeBakey Veterans Affairs Medical Center
Houston, TX

Learning Objectives:

1. Evaluate current literature supporting the use of renally-dosed enoxaparin for prevention of thromboembolic complications in patients with advanced chronic kidney disease (ACKD)
2. Compare the characteristics and clinical (efficacy and safety) outcomes of ACKD patients with atrial fibrillation in periprocedural bridging with enoxaparin versus continuous heparin
3. Analyze the economic differences between enoxaparin and heparin use in this patient population

Self-Assessment Questions:

1. Treatment with enoxaparin is contraindicated in patients with severe renal insufficiency (CrCl <30 mL/min).
 - a. True
 - b. False
2. What is an advantage of using enoxaparin versus continuous heparin in atrial fibrillation?
 - a. Reversal agent availability
 - b. More predictable dose response
 - c. More established therapeutic drug monitoring
 - d. Lower cost per unit
 - e. Increased length of hospitalization
3. Which of the following are indications for periprocedural bridging to warfarin with parenteral anticoagulation in AF?
 - a. Rheumatic valvular disease
 - b. Prior stroke or TIA \leq 3 months
 - c. CHADS₂VASC \geq 5
 - d. All of the above

Answers:

1. b (False)
2. b (More predictable dose response)
3. d (All of the above)

EVALUATION OF AN INPATIENT CLINICAL DECISION-MAKING TOOL FOR DIRECT ORAL ANTICOAGULANTS

Caroline Root

Michael E. DeBakey Veterans Affairs Medical Center
Houston, TX

Learning Objectives:

1. Review current literature on the use of direct oral anticoagulants in non-valvular atrial fibrillation and venous thromboembolism management
2. Discuss the appropriateness of DOAC dosing in hospitalized medicine patients
3. Evaluate the effectiveness of a clinical decision-making order set to guide prescribers toward appropriate ordering of DOAC therapy

Self-Assessment Questions:

1. Which of the following are approved indications for DOAC therapy?
 - a. NVAF
 - b. VTE treatment and NVAF
 - c. Anticoagulation after mechanical mitral valve replacement, VTE treatment, and NVAF
 - d. None of the above
2. What are reasons DOAC therapy may be considered advantageous to warfarin?
 - a. DOACs require less frequent laboratory monitoring
 - b. DOACs do not necessitate dietary restrictions
 - c. DOACs have been demonstrated to have improved efficacy and safety compared to warfarin
 - d. All of the above
3. Which of the following are considered *major* drug-drug interactions with rivaroxaban?
 - a. Rifampin, carbamazepine, phenytoin, ketoconazole
 - b. Ibuprofen, aspirin
 - c. Naproxen, ranitidine
 - d. None of the above

Answers:

1. B (VTE treatment and NVAF)
2. D (All of the above)
3. A (Rifampin, carbamazepine, phenytoin, ketoconazole)

CHANGES IN ELDERLY ANTICOAGULATION PRESCRIBING AFTER ADDITION OF DOACS (CHEAP-ADD)

Melissa Williams

Texas Tech University Health Sciences Center School of Pharmacy
Amarillo TX

Learning Objectives:

1. Discuss changes in guideline recommendations over time for stroke prevention in patients with atrial fibrillation.
2. Differentiate the advantages, disadvantages, and general prescribing concerns for warfarin versus direct oral anticoagulants (DOACs) in the elderly population.
3. Identify reasons for under-prescribing of anticoagulation in elderly patients with atrial fibrillation that may be mitigated by the use of DOACs.

Self-Assessment Questions:

1. Which of the following is a guideline based recommendation for stroke prevention in patients with atrial fibrillation?
 - A. For patients with NVAF and a CHA₂DS₂-VASc of 2, oral anticoagulation is not recommended
 - B. For patients with NVAF and a CHA₂DS₂-VASc of 2 or greater, oral anticoagulation is recommended and can include either warfarin or a DOAC
 - C. For patients with NVAF and a CHA₂DS₂-VASc of 2 or greater, a DOAC is preferred over warfarin
 - D. For patients with NVAF and a CHA₂DS₂-VASc of 2 or greater, warfarin is preferred over a DOAC
2. Which of the following are considered advantages of DOAC's compared to warfarin? **SELECT ALL THAT APPLY.**
 - A. Less cost
 - B. Fewer drug-drug interactions
 - C. Long half life, therefore one missed dose is less concerning
 - D. Less monitoring
3. **True/False:** DOAC's demonstrated non-inferiority to warfarin in the prevention of AF-related strokes but was associated with an increased risk of intracranial hemorrhage

Answers:

1. B
2. B, D
3. False

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIIC - INTERNAL MEDICINE/PHARMACOTHERAPY

**APPROPRIATENESS OF DIRECT ORAL ANTICOAGULANT PRESCRIBING AT A TERTIARY
ACADEMIC MEDICAL CENTER**

Megan Shipsky
Ochsner Medical Center
New Orleans, LA

Learning Objectives:

1. Identify the appropriate use of direct-acting oral coagulants in patients
2. Identify the incidence of inappropriate prescribing of direct-acting oral anticoagulants
3. Describe the effects of prescribing inappropriate direct-acting oral anticoagulant

Self-Assessment Questions:

1. What is thought to be a benefit to using a direct acting anticoagulant compared to warfarin?
 - a. DOACs lead to less potential for bleeding compared to warfarin
 - b. There is no outpatient monitoring of levels associated with DOACs
 - c. Many patients prefer to not eat Vitamin K rich foods
 - d. A and B
2. What is the rate of inappropriate DOAC prescribing rate currently cited in the literature by Whitworth et al?
 - a. 10%
 - b. 30%
 - c. 60%
 - d. 0%

Answers:

1. D
2. C

**EVALUATION OF A TOOL TO PREDICT 90-DAY READMISSION OR DEATH FOLLOWING
HOSPITALIZATION FOR COPD**

Alexander Patlovany
San Antonio Military Medical Center
San Antonio, TX

Learning Objectives:

1. To identify components of the PEARL score
2. To assess patients for risk of readmission for COPD

Self-Assessment Questions:

1. Which of the following is not a component of the PEARL Score?
 - a. Previous admissions
 - b. Age
 - c. Right Ventricular Failure
 - d. Length of Stay
2. According to the PEARL Score, which eMRCD score puts a patient most at risk for readmission after an acute COPD exacerbation?
 - a. 1
 - b. 2
 - c. 5a
 - d. 5b

Answers:

1. D
2. D

RETROSPECTIVE STUDY ON THE EFFECT OF VITAMIN K IN BLEED PREVENTION IN NON-BLEEDING CIRRHOSIS PATIENTS

Pinhui Chen

Valley Baptist Medical Center - Brownsville
Brownsville, TX

Learning Objectives:

1. Describe the current literature on the use of vitamin K in bleed prevention in cirrhosis patients
2. Analyze the data collected of Vitamin K in bleed prevention in non-bleeding cirrhosis patients
3. Evaluate the application of study in appropriate clinical settings

Self-Assessment Questions:

1. Which of the following is true about cirrhosis
 - a. It is a purely coagulative process
 - b. It is a purely anticoagulative process
 - c. It is a mixed of procoagulation and anticoagulation
 - d. It does not affect coagulation
2. INR is a good measurement for bleeding risk in cirrhosis patient
 - a. True
 - b. False
3. What is the role of Vitamin K in cirrhotic patients with elevated INR?
 - a. Vitamin K should not be routinely administered
 - b. Vitamin K has been shown to dramatically decrease INR and should always be administered when INR is elevated
 - c. Vitamin K should only be administered if INR is > 2
 - d. Vitamin K should be administered along with fresh frozen plasma to prevent bleeds

Answers:

1. C
2. B
3. A

**EFFECTS OF AS-NEEDED INTRAVENOUS ANTIHYPERTENSIVE
ON THE LENGTH OF HOSPITAL STAY**

Kayla Phillips

Doctors Hospital at Renaissance
Edinburg, TX

Learning Objectives:

1. Explain the mechanism of action of hydralazine and metoprolol and how the mechanism contributes to side effects of these medications.
2. Describe how as-needed intravenous antihypertensive therapy relates to patient care and how it effects their length of stay.
3. Interpret the findings from the as-needed intravenous hydralazine and metoprolol study and apply them to their own practice.

Self-Assessment Questions:

1. How may the use of as-needed intravenous antihypertensives lead to an increased length of stay?
 - a. Adverse events due to rapid lowering of blood pressure
 - b. Inappropriately giving antihypertensives due to lack of administration parameters
 - c. Inability to discharge due to lack of blood pressure control
 - d. All of the above
2. There are clear guidelines on how to treat asymptomatic hypertension in the acute care setting.
 - a. True
 - b. False
3. In order to ensure safety of as-needed intravenous antihypertensive therapy, which of the following can you implement at your own institution?
 - a. Require administration parameters on every order for as-needed antihypertensives
 - b. Reject all orders for as-need intravenous antihypertensives
 - c. Recommend to use oral antihypertensive alternatives

Answers:

1. D.
2. B.
3. A.

IMPACT OF A PHARMACIST MANAGED PROTOCOL LIMITING CONTINUOUS INFUSION PROTON PUMP INHIBITOR USE IN PATIENTS WITH AN UPPER GASTROINTESTINAL BLEED

Lauren Schwaner

Texas Health Presbyterian Hospital Dallas
Dallas, TX

Learning Objectives:

1. Describe the pharmacology behind using proton pump inhibitors (PPI) in upper gastrointestinal bleeds (GIB)
2. Compare and contrast the literature evaluating continuous versus intermittent PPI administration in upper GIBs
3. Investigate the effects of implementing a pharmacist driven protocol allowing auto-substitution of continuous PPI administration to intermittent in hemodynamically stable patients with an upper GIB

Self-Assessment Questions:

1. Pantoprazole continuous infusions are superior to intermittent bolus dosing when treating upper gastrointestinal bleeds?
 - a. True
 - b. False
2. After this pharmacist managed protocol was implemented, how many pantoprazole continuous infusion administrations were allowed prior to automatic substitution to intermittent IV push administration in hemodynamically stable patients?
 - a. 1
 - b. 2
 - c. 3
3. Which of the following statistically significant results were found in the retrospective analysis of patients at Texas Health Presbyterian Dallas?
 - a. Reduced hospital length of stay post-protocol implementation
 - b. Reduced incidence re-bleeding within 7 days post-protocol implementation
 - c. Reduced median number of pantoprazole continuous infusion administrations per patient post-protocol implementation
 - d. Reduced mortality post-protocol implementation

Answers:

1. B
2. A
3. C

ASSESSING THE ACCURACY OF SEPSIS ALERTS: ST. JOHN SEPSIS AGENT ALGORITHM

Elizabeth Stephenson

Memorial Hermann – Texas Medical Center
Houston, Texas

Learning Objectives:

1. Identify the importance of early sepsis diagnosis and treatment
2. Define the St. John Sepsis Alert Algorithm criteria and quick Sequential Organ Failure Assessment
3. Analyze the percent of accurate alerts via the St. John Sepsis Alert Algorithm compared to quick Sequential Organ Failure Assessment

Self-Assessment Questions:

1. Every hour treatment is delayed to a patient with sepsis, mortality increases by 3%.
 - a. True
 - b. False
2. The St. John Sepsis Agent Algorithm fires an alert when which of the following are met:
 - a. 3 of 4 SIRS criteria
 - b. 2 of 4 SIRS criteria
 - c. 1 sign of organ dysfunction
 - d. 2 signs of organ dysfunction
3. The quick Sequential Organ Failure Assessment is a bedside tool that assesses risk of mortality in sepsis patient using the following criteria:
 - a. Respiratory rate (>22 breaths per minute)
 - b. Heart rate (>110 beats per minute)
 - c. Altered mental status (GCS <14)
 - d. Systolic blood pressure (<100 mm Hg)

Answers:

1. B
2. B, C
3. A, C, D

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION XIII A - MEDICATION-USE SAFETY, PHARMACY
SYSTEMS & OPERATIONS**

**IMPACT OF A PHARMACY EDUCATIONAL INTERVENTION FOR PAIN MANAGEMENT IN A
UROLOGIC SURGERY POPULATION**

Jonathan Hartmann
Ochsner Medical Center
New Orleans, LA

Learning Objectives:

1. To evaluate the impact of a pharmacist driven, physician educational intervention on prescribing by physician groups by sharing department level prescribing data.
2. To analyze clinical variance in opioid prescribing for select urologic surgical procedures.
3. To formulate a standardized practice recommendation in urologic surgery patients.

Self-Assessment Questions:

1. Which of the following may be thought to be the most significant potential confounder in analyzing opioid prescribing rates after an educational intervention?
 - a. Patient preferences over pharmacotherapy
 - b. New restrictive prescribing legislature changes prior to intervention
 - c. Physician preferences over pharmacotherapy
 - d. Formulation/type of opioid used
2. What is thought to be a potential benefit of physician education using prescribing practice data?
 - a. By challenging the practice model, you may see better business outcomes
 - b. By providing a discussion about standardizing/optimizing practice, you may limit clinical variance and excess
 - c. By establishing a rapport with healthcare providers, the pharmacist can initiate a peer-driven response to improving the practice
 - d. B and C
3. What may be the most effective recommendation to make to providers regarding pain management in urologic surgery patients?
 - a. Use urinary antispasmodics when warranted and as needed NSAIDs, with opioids only for breakthrough analgesia
 - b. Use only scheduled NSAIDs and antispasmodics at maximum tolerated dose
 - c. Use scheduled NSAIDs with local anesthetic agents as needed
 - d. Use a scheduled opioid analgesic regimen/taper with as needed breakthrough option

Answers:

1. B
2. D
3. A

OUTCOMES AFTER BENZODIAZEPINE DISCONTINUATION IN OPIOID-DEPENDENT VETERANS

Leslie Coons

VA North Texas Health Care System
Dallas, Texas

Learning Objectives:

1. Analyze the outcomes after benzodiazepines are discontinued in opioid-dependent veterans
2. Develop potential strategies for effective benzodiazepine discontinuation
3. Evaluate if benzodiazepines can be safely discontinued in patients outside of the VA

Self-Assessment Questions:

1. What side effects do opioids and benzodiazepines share?
 - I. Respiratory Depression
 - II. Euphoria
 - III. Sedation
 - a. I and II
 - b. III
 - c. I and III
 - d. I, II, and III
2. Prior to starting an SSRI, what risk should be assessed for a person concurrently taking an opioid?
 - a. Worsening constipation
 - b. Serotonin syndrome
 - c. Sedation
 - d. Frequent urination

Answers:

1. C
2. B

**IDENTIFYING AT RISK PATIENTS FOR OPIOID MISUSE IN NON-CANCER CHRONIC PAIN
MANAGEMENT USING EPIC®-EHR IN OUTPATIENT CLINICS OF A HEALTHCARE SYSTEM**

Abdul M. Gabisi Jr.
Harris Health System
Houston, TX

Learning Objectives:

1. To endorse best practice guidelines for prescribing opioids
2. To identify percentage of baseline UDS/UDT documentation
3. To outline an education campaign for opioid naive patients

Self-Assessment Questions:

1. Which of the following are recommendations by CDC in the March 2016 guidelines for prescribing opioids for chronic pain?
 - a. Urine Drug Testing
 - b. Prescription Drug Monitoring Program (PDMP)
 - c. Lowest effective dose of immediate-release opioids
 - d. All the above
2. Which of the following classes of drugs clinicians should avoid when prescribing opioid pain medications?
 - a. Benzodiazepines
 - b. NSAID
 - c. Anticonvulsants
 - d. Skeletal Muscle Relaxant
3. What is the Morphine Milligram Equivalent (MME) dose per day that increases risk for opioid-related overdose?
 - a. 25 MME per day
 - b. 50 MME per day
 - c. 90 MME per day
 - d. B and C

Answers:

1. D
2. A
3. D

IMPACT OF HURRICANE HARVEY AT A CHARITY CLINIC PHARMACY, AND THE RESPONSE OF THE PHARMACY STAFF FOLLOWING THE HURRICANE

Blanca Y. Guerra
San José Clinic
Houston, TX

Learning Objectives:

1. Evaluate a charity clinics response after Hurricane Harvey
2. Prepare a protocol to effectively and quickly respond to emergency situations

Self-Assessment Questions:

1. What organization provided volunteers for relief efforts after hurricane Harvey at the non-profit clinic?
 - a. Americares
 - b. TSBP
 - c. Project HOPE
 - d. FEMA
2. The value of medications donated at the charity clinic after hurricane Harvey exceeded?
 - a. One billion
 - b. One million
 - c. Two hundred million
 - d. Three billion

Answers:

1. c
2. b

INTERMITTENT IV INFUSION VERSUS SLOW IV PUSH BETA-LACTAM ADMINISTRATION: EFFECT ON CLINICAL OUTCOMES

Paige Baize
Texas Health Presbyterian Dallas
Dallas, Texas

Learning Objectives:

1. Compare and contrast intravenous piggyback (IVPB) versus intravenous push (IVP) administration of beta-lactam antibiotics
2. Evaluate the effect of transitioning from IVPB to IVP administration of select beta-lactam antibiotics

Self-Assessment Questions:

1. Transitioning to slow IV push administration resulted in fewer PICC or midline placements.
 - a. True
 - b. False
2. Which of the following outcomes were found to be statistically significant?
 - a. Increased incidence of phlebitis
 - b. Increased days of antibiotic therapy
 - c. Increased mortality
 - d. None of the above
3. Transitioning to slow IV push administration had no negative impact on clinical improvement 48 hours after antibiotic initiation.
 - a. True
 - b. False

Answers:

1. False
2. D
3. True

DECREASE IN STANDARDIZED VANCOMYCIN INFUSION RATES FROM 1000 MG PER HOUR TO 750 MG PER HOUR: EFFECT ON INFUSION-RELATED REACTIONS

Sydney N. Kutter

Central Texas Veterans Health Care System
Temple, Texas

Learning Objectives:

1. Describe the types of infusion-related reactions associated with receiving vancomycin.
2. Evaluate the differences in infusion rate-related adverse effect profiles between vancomycin 1000 mg per hour and 750 mg per hour.

Self-Assessment Questions:

1. What is the recommended maximum vancomycin infusion rate per the 2009 guidelines?
 - a. At least 10 mg per minute over 100 minutes
 - b. At least 15 mg per minute over 150 minutes
 - c. At least 1 hour and extended to 1.5-2 hours for higher dosages (e.g. 2 g)
 - d. At least 2 hours and extended to 2.5-3 hours for higher dosages (e.g. 3 g)
2. T/F. Red man syndrome (RMS) is a rate-independent infusion reaction to vancomycin that involves the face, neck, and upper torso.
3. What is the current standard of practice for managing patients with red man syndrome (RMS)?
 - a. Inject epinephrine intramuscularly into the outer thigh of patient as a life-saving measure
 - b. Slow the vancomycin infusion rate and continue to monitor the patient
 - c. Administer antihistamine prior to the infusion
 - d. B and C

Answers:

1. C
2. F
3. D

**IMPROVEMENT OF PATIENT'S PAIN ASSESSMENT AND AS NEEDED PAIN MEDICATION
ADMINISTRATION**

Wei Lai

Memorial Hermann – Texas Medical Center
Houston, TX

Learning Objectives:

1. Evaluate the current process of pain assessment score documentation for as needed pain medication administration at their own institutions
2. Apply the interventions implemented at Memorial Hermann – Texas Medical Center to their own institutions in order to improve assessment and management of patients' pain.

Self-Assessment Questions:

1. Which of the following is not one of The Joint Commission standards related to pain assessment and management?
 - a. Identify a leader or leadership team that is responsible for pain management and safe opioid prescribing
 - b. The hospital assesses and manages the patient's pain and minimizes the risks associated with treatment
 - c. The hospital collects data on pain assessment and pain management including types of interventions and effectiveness
 - d. All of the above are The Joint Commission standards for pain assessment and management
2. Why is documenting pain assessment score before administration of PRN pain medication necessary?
 - a. To help assess whether the administered PRN pain medication is adequate to control patient's pain
 - b. To assist in meeting The Joint Commission pain standard of analyzing hospital data on pain management
 - c. To evaluate the timeliness of PRN pain medication administration
 - d. All of the above

Answers:

1. D
2. D

ALCALDE XXXII

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIII B - PEDIATRICS/NEONATOLOGY

SHORT-TERM EFFECTS OF PROPHYLACTIC CORTICOSTEROID THERAPY IN VENTILATOR-DEPENDENT, PRETERM INFANTS: HYDROCORTISONE VERSUS DEXAMETHASONE

An Nguyen

Baylor Scott and White McLane Children's Medical Center
Temple, TX

Learning Objectives:

1. Identify risk factors for developing bronchopulmonary dysplasia in neonates
2. Compare the use of dexamethasone and hydrocortisone in preventing bronchopulmonary dysplasia in preterm neonates

Self-Assessment Questions:

1. Which of the following risk factors contribute(s) to the development of bronchopulmonary dysplasia in neonates?
 - a – Surfactant deficiency
 - b – Mechanical ventilator requirement
 - c – Prematurity
 - d – All of the above
2. What is the theoretical benefit of hydrocortisone compared to dexamethasone as bronchopulmonary dysplasia prophylactic therapy?
 - a – There is no significant difference between hydrocortisone and control group in relation to neurologic outcomes
 - b – Hydrocortisone can be given either as PO or IV therapy
 - c – Hydrocortisone is not associated with a decrease in hippocampal volume
 - d – A and C

Answers:

1. D
2. D

ROLE OF EARLY-ONSET SEPSIS RISK CALCULATOR TO GUIDE MANAGEMENT OF NEONATAL SEPSIS RELATED TO CHORIOAMNIONITIS

Payal Kapadia

Baylor Scott and White Health All Saints Medical Center
Fort Worth, TX

Learning Objectives:

1. Evaluate recent changes in the treatment and management of early-onset sepsis related to chorioamnionitis
2. Analyze the incidence of antibiotic exposure before and after the implementation of the early-onset sepsis risk calculator
3. Compare the incidence of laboratory testing, duration of antibiotic therapy and length of NICU stay before and after the implementation of the early-onset sepsis risk calculator

Self-Assessment Questions:

1. Neonatal early-onset sepsis (EOS) is defined as:
 - a. Invasive bacterial infection of the blood and/or cerebrospinal fluid that occurs in the first week of life
 - b. Invasive bacterial infection of the blood and/or cerebrospinal fluid that occurs after the first 3 months of life
 - c. Pulmonary infection that occurs in the first week of life
 - d. Central nervous system infection that occurs in the first week of life
2. What is the most common organism effecting neonates in EOS?
 - a. Group B *Streptococcus*
 - b. *E. Coli*
 - c. Methicillin-resistant *Staphylococcus aureus*
3. What is thought to be the benefit of using the EOS risk calculator for early-onset sepsis in newborns affected by chorioamnionitis?
 - a. Decrease abx
 - b. Decrease cultures/labs
 - c. Decrease length of stay
 - d. All the above

**ASSESSMENT OF VANCOMYCIN DOSING AND PHARMACOKINETICS IN POSTOPERATIVE
PEDIATRIC PATIENTS IN THE CARDIOVASCULAR INTENSIVE CARE UNIT**

Caitlin Le

Children's Health Children's Medical Center Dallas
Dallas, TX

Learning Objectives:

1. Review differences in pharmacokinetics and recommended vancomycin dosing in pediatric cardiology patients
2. Assess trends of vancomycin serum trough levels and associated vancomycin dosing regimens at our institution
3. Evaluate potential confounding factors associated with supratherapeutic vancomycin serum trough levels

Self-Assessment Questions:

1. What is/are factor(s) that may contribute to the variable pharmacokinetic profile of vancomycin in the pediatric cardiology population?
 - a. Increased potential for renal insufficiency
 - b. Altered volume of distribution
 - c. Concomitant use of nephrotoxic medications
 - d. All of the above
2. What is a factor that may increase the risk of acute kidney injury (AKI) in pediatric patients post cardiothoracic surgery?
 - a. Decreased time on cardiopulmonary bypass
 - b. Lower mean age
 - c. Lower preoperative serum creatinine
 - d. No past medical history of cardiac surgery prior to current surgery

Answers:

1. D
2. B

INTRAVENOUS ENOXAPARIN IN PEDIATRIC BURN PATIENTS: A RETROSPECTIVE CHART REVIEW

Vonya N. Streetz
INTEGRIS Baptist Medical Center
Oklahoma City, OK

Learning Objectives:

1. Discuss the potential limitations of administering medications by the subcutaneous route
2. Explain the proper administration of intravenous enoxaparin doses
3. Monitor the safety and efficacy of intravenous enoxaparin use in pediatric burn patients

Self-Assessment Questions:

1. Which of the following is a potential limitation of using the subcutaneous route of administration for enoxaparin in pediatric burn patients?
 - a. Increased anxiety
 - b. More intensive monitoring than heparin
 - c. Insufficient absorption
 - d. Both A and C
2. When administering enoxaparin by the intravenous route, how long should the infusion last in order to mimic the release characteristics and peak levels of the subcutaneous route?
 - a. 10 minutes
 - b. 15 minutes
 - c. 30 minutes
 - d. Administer as IV push
3. What laboratory markers should be analyzed when monitoring enoxaparin therapy in pediatric burn patients? Mark all that apply.
 - a. SCr
 - b. LFTs
 - c. INR
 - d. Anti-Xa levels

Answers:

1. D
2. C
3. A and D

**OPTIMIZATION OF PERI-OPERATIVE ANTIMICROBIAL REGIMENS FOR PEDIATRIC LIVER
TRANSPLANT RECIPIENTS AT TEXAS CHILDREN'S HOSPITAL**

Sarah E. Redmond
Texas Children's Hospital
Houston, TX

Learning Objectives:

1. Identify appropriate peri-operative antimicrobial regimens for liver transplant patients
2. Analyze historical antimicrobial regimens used in the peri-operative period in liver transplant recipients
3. Demonstrate the need for updated peri-operative liver transplant order sets

Self-Assessment Questions:

1. Which of the following are appropriate antimicrobials to be used post-operatively in liver transplant patients?
 - a. Cefazolin
 - b. Gentamicin
 - c. Piperacillin-tazobactam
2. What is an appropriate duration of peri-operative antimicrobial prophylaxis therapy in liver transplant patients?
 - a. No longer than 72 hours
 - b. 6 hours
 - c. 6 days
3. What is the best way to prevent inappropriately long durations of peri-operative antimicrobial prophylaxis therapy?
 - a. Never give antimicrobials peri-operatively for prophylaxis therapy
 - b. Order therapy with a 48 hour end date
 - c. Remember to discontinue therapy after 48 hours

Answers:

1. C. Piperacillin-tazobactam
2. A. No longer than 72 hours
3. B. Order therapy with a 48 hour stop date

ROTAVIRUS VACCINATION COMPLIANCE RATES IN PEDIATRIC PATIENTS

Amber Grady

University Health Shreveport
Shreveport, LA

Learning Objectives:

1. Discuss the rotavirus vaccination and the guidelines associated with administration.
2. Analyze compliance rates of the rotavirus vaccination series at a safety net healthcare institution.
3. Compare the rotavirus compliance rates of patients who are neonatal intensive care (NICU) graduates to those who did not spend time in the NICU.

Self-Assessment Questions:

1. The rotavirus vaccine series must be initiated no later than?
 - a. 8 months 0 days
 - b. 6 weeks 0 days
 - c. 14 weeks 6 days
2. Based on the data presented, rotavirus vaccination compliance rates at University Health† hreveport are below national average.
 - a. True
 - b. False

Answers:

1. C
2. A

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For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION XIIC - PEDIATRICS/NEONATOLOGY &
PSYCHAITRY**

**THE IMPACT OF BUCCAL DEXTROSE GEL ON THE PREVENTION OF HYPOGLYCEMIA AND
NEONATAL INTENSIVE CARE UNIT ADMISSION**

Lauren Yancy

Texas Health Presbyterian Hospital Dallas
Dallas, Texas

Learning Objectives:

1. Discuss the role of buccal dextrose gel in the treatment of hypoglycemia amongst high risk and mildly symptomatic neonates for the prevention of admission to the neonatal intensive care unit (NICU).
2. Gain understanding of a typical neonate's physiologic response to buccal dextrose and its effect on blood glucose.

Self-Assessment Questions:

1. From our protocol, developed from recent studies, what is the recommended strength and formulation of dextrose to be given to a neonate experiencing an initial episode of hypoglycemia?
 - a. Intravenous dextrose 10%
 - b. Intravenous dextrose 25%
 - c. Buccal dextrose 10% gel
 - d. Buccal dextrose 40% gel
2. Which characteristic is included within the definition of neonate who is "high risk" for developing hypoglycemia?
 - a. Neonates born prior to 35 weeks gestation
 - b. Neonates born to diabetic mothers
 - c. Neonates with an APGAR score < 5 upon delivery
 - d. Multiples (i.e. twins, triplets, etc.)
3. According to the retrospective analysis of patients at Texas Health Presbyterian Dallas, a statistically significant difference was found between the rate of NICU admission between the pre-protocol group (< 40 mg/dL) and the post-protocol group (< 47 mg/dL)?
 - a. True
 - b. False

Answers:

1. D
2. B
3. True

**COMPARATIVE EFFICACY AND SAFETY OF PRO-MOTILITY AGENTS IN CHILDREN WITH
GASTROPARESIS**

Kaitlin R. Wasko
Children's Medical Center Dallas
Dallas, TX

Learning Objectives:

1. To identify gaps in evidence-based literature regarding treatment of gastroparesis in children
2. To compare and contrast the studied efficacy and safety of bethanechol, metoclopramide, and erythromycin in the treatment of gastroparesis in children at a pediatric academic teaching institution

Self-Assessment Questions:

- 1) Children with gastroparesis are at increased risk for developing which of the following?
 - a) Malnutrition
 - b) GERD
 - c) Persistent emesis
 - d) A and C
- 2) Guidelines regarding the treatment of gastroparesis in children recommend metoclopramide as a first line agent
 - a) True
 - b) False
- 3) According to this retrospective data, use of bethanechol, metoclopramide, and/or erythromycin to promote gastric motility may result in which of the following?
 - a) Increase in feeding volumes
 - b) Decrease in feeding volumes
 - c) Reduction in emesis
 - d) A and C
 - e) B and C

Answers:

- 1) D
- 2) B
- 3) D

IMPACT OF LITHIUM ON SUICIDALITY IN THE VETERAN POPULATION

Kelsie M. Stark

Michael E. DeBakey Veterans Affairs Medical Center
Houston, TX

Learning Objectives:

1. Evaluate the change in number of suicide attempts within 3 months prior to lithium initiation and within 3 months after the patient has been on lithium for a duration of 6 months
2. Determine the change in suicidal ideation within 3 months prior to lithium initiation and within 3 months after the patient has been on lithium for a duration of 6 months

Self-Assessment Questions:

1. Lithium can decrease aggression and possibly impulsivity, which may mediate its special anti-suicidal effects.
 - a. True
 - b. False
2. When is the appropriate time to draw a lithium level after initiation of lithium for BID or QD dosing?
 - a. One week after initiation, one hour post dose
 - b. 12 days after initiation, 10-12 hours post dose
 - c. Four to five days after initiation, 10-12 hours post dose
 - d. Seven days after initiation, five hours post dose

Answers:

1. a (True)
2. c (Four to five days after initiation, 10-12 hours post dose)

RISK STRATIFICATION FOR NALOXONE INTERVENTIONS AT A VETERANS AFFAIRS TEACHING HOSPITAL

Heather N. Rozea

Michael E. DeBakey Veterans Affairs Medical Center
Houston, TX

Learning Objectives:

1. To evaluate the proper use and prescribing of naloxone kits
2. To analyze data extracted from a national database to locate patients in need of interventions and advocate for education of providers and staff

Self-Assessment Questions:

1. Compared to the civilian population, veterans are _____ likely to die from accidental prescription opioid overdose?
 - a. More
 - b. Less
 - c. Equally as
2. Which of the following disorders commonly occur concomitantly in veterans with high dose opioid use?
 - a. Posttraumatic stress disorder
 - b. Major depressive disorder
 - c. Alcohol use disorder
 - d. All of the above

Answers:

1. a (More)
2. d (All of the above)

IMPACT OF PROVIDER EDUCATION AND IMPLEMENTATION OF SYMPTOM-TRIGGERED THERAPY, ON OUTCOMES, FOR PATIENTS WITH ALCOHOL WITHDRAWAL – PHASE II

Karolina M. Grzesiak
Central Texas Veterans Health Care System
Temple, TX

Learning Objectives:

1. Define alcohol withdrawal syndrome (AWS) and identify the associated symptomology.
2. Discuss fixed-dosing therapy and symptom-triggered therapy for treatment of alcohol withdrawal syndrome (AWS).
3. Examine the effect of the implementation of symptom-triggered therapy on length of hospital stay and cumulative benzodiazepine dose administered in patients with alcohol withdrawal syndrome (AWS).

Self-Assessment Questions:

1. What is the typical time period for when seizures begin occurring after patient has taken his/her last drink?
 - a. 6-12 hours after the last drink
 - b. 12-24 hours after the last drink
 - c. 24-48 hours after the last drink
 - d. 48-72 hours after the last drink
2. Delirium tremens occurs in 5% of patients and has a mortality rate of 5%.
 - a. True
 - b. False
3. What is the benefit of symptom-triggered therapy compared to fixed-dosing in treatment of alcohol withdrawal syndrome?
 - a. Decrease in hospitalization stay
 - b. Decrease in initial CIWA-Ar monitoring
 - c. Decrease in total benzodiazepine use
 - d. A and C

Answers:

1. C
2. True
3. D

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For Pharmacy Residents, Fellows & Preceptors

PLATFORM SESSION XIVA - SOLID ORGAN TRANSPLANT

ACUTE ANTIBODY MEDIATED REJECTION TREATMENT IMPACT ON CLASS I AND CLASS II ANTI-HLA ANTIBODIES IN PEDIATRIC KIDNEY TRANSPLANT RECIPIENTS

Elisabeth Kincaide

University Health System, University of Texas Health San Antonio and
University of Texas at Austin College of Pharmacy
San Antonio, TX

Learning Objectives:

1. Describe acute antibody mediated rejection (AMR) treatment modalities in pediatric kidney transplant recipients
2. Describe donor specific antibodies (DSA) response to AMR treatment
3. Identify predictors associated with DSA reduction
Assess efficacy and safety of AMR treatment in pediatric kidney transplant recipients

Self-Assessment Questions:

1. In this analysis, class I and class II DSA respond equally to acute AMR treatment in pediatric KTR.
 - a. True
 - b. False
2. In this analysis, positive predictor associated with DSA reduction include:
 - a. Rituximab
 - b. Higher DSA MFI
 - c. Adherence
 - d. Time from transplantation
3. In this analysis, antibody response was not sustainable post AMR treatment as demonstrated by DSA rebound at 90 days post treatment.
 - a. True
 - b. False

Answers:

1. b. False
2. a. rituximab
3. b. False

TO DETERMINE IF THERE IS A RELATIONSHIP BETWEEN USING INHALED TOBRAMYCIN AND DEVELOPMENT OF ACUTE KIDNEY INJURY IN LUNG TRANSPLANT PATIENTS

Michael Kent
UT Southwestern Medical Center
Dallas, TX

Learning Objectives:

1. To describe risk factors lung transplant patients have for renal insufficiency
2. To question the systemic absorption and accumulation of inhaled tobramycin

Self-Assessment Questions:

1. What are risk factors for lung transplant patients to develop AKI?
 - A. Nephrotoxic immunosuppressive medications
 - B. Nephrotoxic antibiotics
 - C. Pre-existing renal dysfunction
 - D. All of the above
2. What are the potential side effects of systemic tobramycin accumulation?
 - A. Sudden change in taste
 - B. Renal Toxicity
 - C. Ototoxicity
 - D. Both B & C
 - E. All of the above

Answers:

1. D
2. D

**COST SAVINGS AND PATIENT OUTCOMES ASSOCIATED WITH CONVERSION FROM BRAND NAME
TACROLIMUS TO A GENERIC FORMULATION IN NEW RENAL TRANSPLANT RECIPIENTS AT AN
ACADEMIC MEDICAL CENTER**

Jeena M. Thomas

UTMB Health

Galveston, TX

Learning Objectives:

1. Describe the role of tacrolimus in solid organ transplantation
2. Discuss the advantages and disadvantages associated with converting brand tacrolimus to generic tacrolimus
3. Evaluate cost savings and patient outcomes when converting brand tacrolimus to generic tacrolimus

Self-Assessment Questions:

1. Which of the following is true regarding the role of tacrolimus in solid organ transplantation?
 - a. Tacrolimus is a macrolide derivative and potent calcineurin inhibitor
 - b. Tacrolimus is last-line therapy for immunosuppression in solid organ transplant patients
 - c. Tacrolimus is a narrow-therapeutic index and requires routine drug monitoring
 - d. A and C
2. What are concerns of using high-cost brand tacrolimus?
 - a. Non-compliance
 - b. Risk of rejection
 - c. Risk of graft loss
 - d. A, B & C
3. What is the primary outcome of the study?
 - a. Percent change in cost from brand to generic tacrolimus in both the study groups
 - b. Percentage of patients at goal tacrolimus levels between 8-10 ng/mL
 - c. Biopsy-proven rejection rates
 - d. All of the above

Answers:

1. D
2. D
3. A

**OUTCOMES IN KIDNEY TRANSPLANT RECIPIENTS WITH BK VIREMIA TREATED WITH
LEFLUNOMIDE**

Lance Lineberger
Ochsner Medical Center
New Orleans, Louisiana

Learning Objectives:

1. To explain the impact of BK viremia on the development of nephropathy and subsequent allograft dysfunction
2. To evaluate the use of leflunomide in the treatment of BK viremia

Self-Assessment Questions:

- 1) What is the initial management of BK viremia?
 - a) Cidofovir
 - b) Leflunomide
 - c) Increase in maintenance immunosuppression
 - d) Reduction in maintenance immunosuppression
- 2) What patient population is at greatest risk for BK viremia?
 - a) Heart failure patients
 - b) HIV positive patients
 - c) Kidney transplant patients
 - d) Patients diagnosed with diabetes type II
- 3) Untreated BK viremia can result in which of the following?
 - a) Nephropathy and allograft loss
 - b) Heart failure
 - c) Acute cellular rejection
 - d) A and B

Answers:

1. D. Reduction in maintenance immunosuppression
2. C. Kidney Transplant patients
3. A. Nephropathy and allograft loss

USE OF ALLOMAP TESTING AS A PREDICTOR OF EARLY ACUTE CELLULAR REJECTION AND IMMUNOSUPPRESSION MANAGEMENT

Mary Sun

CHI St Luke's Health Baylor St Luke's Medical Center
Houston, TX

Learning Objectives:

1. Discuss use of AlloMap testing in heart transplant recipients as a tool in predicting early acute cellular rejection
2. Discuss influence of AlloMap scores on immunosuppression medication management

Self-Assessment Questions:

1. Which of the following is true of AlloMap?
 - a. It detects acute cellular rejection and antibody mediated rejection
 - b. AlloMap scores ≥ 30 are positive for patients ≤ 1 year post-heart transplant, and scores ≥ 34 are positive for patients > 1 year post-heart transplant
 - c. It is an FDA-approved blood test used to identify patients at high risk of developing acute cellular rejection
 - d. AlloMap scores range from 0 to 40, where a higher score represents a lower risk of rejection
2. Which of the following factors may affect AlloMap scores?
 - a. CMV (cytomegalovirus) infection
 - b. CAV (cardiac allograft vasculopathy)
 - c. Immunosuppressant regimen
 - d. Post-transplant ischemic injury
 - e. All of the above
3. According to the findings of this retrospective study:
 - a. In the 2-6 month group, AlloMap scores did NOT correlate well with predicting rejection
 - b. AlloMap scores were more often used to adjust immunosuppressant regimens in the 6-12 month vs. 2-6 month group
 - c. AlloMap testing was frequently used to replace endomyocardial biopsies at our institution
 - d. A and B

Answers:

1. C
2. E
3. D

ASSESSMENT OF THE RATE OF REJECTION IN OVERWEIGHT VERSUS NON-OVERWEIGHT PATIENTS USING INTERLEUKIN-2 RECEPTOR ANTAGONISTS FOR INDUCTION THERAPY

Angelica Burgos

CHI St Luke's Health Baylor St Luke's Medical Center
Houston, TX

Learning Objectives:

1. Explain the use of basiliximab in solid-organ transplantation
2. Describe various agents utilized for solid-organ transplant immunosuppression
3. Compare rejection episodes among overweight versus non-overweight heart and kidney transplant patients receiving basiliximab

Self-Assessment Questions:

1. Which of the following is true of basiliximab?
 - a. Basiliximab is more potent than thymoglobulin and is associated with increased side effects
 - b. It is a monoclonal antibody that binds to interleukin-2 receptors on the surface of activated T-lymphocytes
 - c. It is a polyclonal antibody that acts on T-cell surface antigens and depletes CD4 lymphocytes
 - d. It inhibits T-lymphocyte activation, by binding to FKBP-12 and complexes with calcineurin dependent proteins to inhibit calcineurin phosphatase activity
2. For the study presented today, what was the most utilized maintenance immunosuppressive regimen?
 - a. Tacrolimus, mycophenolate mofetil, prednisone
 - b. Cyclosporine, mycophenolate mofetil, prednisone
 - c. Tacrolimus, mycophenolic acid, prednisone
 - d. Tacrolimus, mycophenolate mofetil, methylprednisolone
3. According to the findings of this retrospective study:
 - a. There was a statistically significant difference in biopsy proven rejections between overweight patients versus non-overweight patients in the kidney transplant group
 - b. There was no statistically significant difference in biopsy-proven rejections noted between overweight patients versus non-overweight patients in the heart and kidney transplant groups
 - c. An increased incidence of 90 day and 1 year biopsy proven rejection was seen in the heart transplant group compared to the kidney transplant group
 - d. B and C

Answers:

1. B
2. A
3. D

ALCALDE XXXII

SOUTHWEST LEADERSHIP CONFERENCE

For Pharmacy Residents, Fellows & Preceptors

**PLATFORM SESSION XIVB - PHARMACOECONOMICS & OUTCOMES
RESEARCH**

**PHARMACOECONOMIC STUDY COMPARING THE COSTS ASSOCIATED WITH NEOSTIGMINE
VERSUS SUGAMMADEX USE IN A TERTIARY HOSPITAL'S OPERATING ROOM AND POST-
ANESTHESIA CARE UNIT**

Julie John

Hendrick Medical Center and Texas Tech School of Pharmacy
Abilene, TX

Learning Objectives:

1. Compare neostigmine and sugammadex in terms of their mechanism of action, side effect profile, cost, and clinical implications
2. Describe the significance of project and its methods

Self-Assessment Questions:

1. Which of the following is a major cost concern associated with the use of sugammadex?
 - a. Cost of drug
 - b. Cost of managing side effects
 - c. Cost of extended OR and PACU length of stay because of longer onset of action
 - d. A and C
2. True or False: Sugammadex reverses the effects of cisatracurium faster than neostigmine
 - a. True
 - b. False
3. Which reversal agent has a FDA recommendation to pre-medicate with atropine or glycopyrrolate?
 - a. Sugammadex
 - b. Neostigmine
 - c. Both agents
 - d. Neither agent

Answers:

1. A
2. B
3. B

EFFECT OF LECTURE CAPTURE ON STUDENT OUTCOMES: A FOCUS ON PHARMACY STUDENTS

Brittany La-Viola

University of Incarnate Word Feik School of Pharmacy
San Antonio, TX

Learning Objectives:

1. Summarize the available literature for the use of lecture recording.
2. Summarize the gaps in literature regarding the use of lecture recording in pharmacy students.
3. Explain the study purpose and study design.

Self-Assessment Questions:

1. Which of the following is true about the current literature on the use of lecture recording? (Learning Objective 1)
 - a. There are no studies looking at lecture recording for pharmacy students
 - b. The only outcome measured in current studies is attendance
 - c. Students found lecture recordings to be helpful
 - d. Faculty members believe that lecture recording is not helpful
 - e. Students believe lecture recordings are not helpful
2. What are the current gaps in the literature on lecture recording? (Learning Objective 2)
 - a. The use of lecture recording in schools where attendance is not mandatory.
 - b. The use of lecture recording in pharmacy schools who required mandatory attendance.
 - c. Objective data to support the notion that lecture recordings improve student outcomes.
 - d. There is no gap in literature as there are robust studies assessing the use of lecture recordings in pharmacy students
 - e. Both B and C
3. What is the primary outcome of “Effect of Lecture Capture on Student Outcomes: A Focus on Pharmacy Students.”? (Learning Objective 3)
 - a. The effect of Lecture Capture on attendance
 - b. Student perceptions of Lecture Capture
 - c. Appropriate use of Lecture Capture
 - d. Correlation between appropriate use and student outcomes
 - e. Both B and D

A PRELIMINARY ECONOMIC EVALUATION OF LIPID SCREENING AND TREATMENT METHODS IN YOUTH AND ADOLESCENTS

Linda Chen
Baylor Scott & White Health
Temple, TX

Learning Objectives:

1. To describe the different lipid screening methods and treatment in youth and adolescents
2. To compare the economic and clinical differences between the screening methods

Self-Assessment Questions:

1. The most recent NHLBI guideline recommends universal lipid screening of all children between 9-11 years old.
 - a. True
 - b. False
2. Based on the results of the Markov model, which of the following is correct?
 - a. Universal screening dominates selective screening
 - b. Universal screening is dominated by selective screening
 - c. Universal screening is more effective and more costly than selective screening
 - d. Universal screening is less effective and less costly than selective screening

Answers:

1. True
2. C

**THE IMPACT OF A VALUE-BASED INSURANCE DESIGN FOR CHRONIC PREVENTIVE
MEDICATIONS ON ADHERENCE AND PERSISTENCE IN AN INTEGRATED DELIVERY SYSTEM**

Esther Yi
Baylor Scott & White Health
Temple, TX

Learning Objectives:

1. Evaluate the effect of a value-based benefit design on medication adherence rates for specific chronic and preventive medications
2. Evaluate the effect of copay reductions on patient outcomes for the following disease states for chronic and preventive medication-utilizing patients:
 - i. Diabetes: A1c, hospitalization and ER utilization, related outpatient visits
 - ii. COPD: Spirometry, hospitalization and ER utilization, related outpatient visits
 - iii. Anticoagulation: Hospitalization and ER utilization, possible reduction in thromboembolic events, related outpatient visits

Self-Assessment Questions:

1. Medication adherence was measured by:
 - a. PDC (Proportion of days covered)
 - b. MPR (Medication Possession Ratio)
 - c. CMA (Continuous Measure of Medication Acquisition)
 - d. Morisky Medication Adherence Scale (MMAS)
2. Based on the results of the study, which of the following is correct?
 - a. There was no change in overall adherence across all drug classes.
 - b. There was an increase in overall adherence across all drug classes.
 - c. There was a decrease in overall adherence across all drug classes.
 - d. None of the above

Answers:

1. A
2. B

SUGAMMADEX, IT'S TIME TO WAKE UP

Kayla Hodges

Baptist Saint Anthony's Hospital
Amarillo, Texas

Learning Objectives:

1. Explain the mechanism of action of sugammadex, neostigmine, and glycopyrrolate
2. Evaluate the efficacy of sugammadex and neostigmine/glycopyrrolate
3. Compare the direct and indirect costs of sugammadex and neostigmine/glycopyrrolate

Self-Assessment Questions:

1. What is the mechanism of action of sugammadex?
 - a. Competitively binds to muscarinic receptors and inhibits cholinergic transmission
 - b. Inhibits destruction of acetylcholine
 - c. Binds rocuronium or vecuronium, reducing the amount of neuromuscular-blocking agent available to bind to nicotinic receptors
 - d. All of the above
2. True/False: In the study presented, there was a reduction in PACU time with the use of neostigmine/glycopyrrolate.
 - a. True
 - b. False
3. Which of the following most accurately summarizes the potential for cost savings of the study presented?
 - a. Sugammadex is a potentially viable economical option for the routine reversal of neuromuscular blockade
 - b. There is no possibly way that the cost of sugammadex could be a viable option for our surgical center
 - c. Sugammadex (drug cost) is the cheapest option available for routine reversal of neuromuscular blockade
 - d. Sugammadex and neostigmine/glycopyrrolate have equivalent cost benefit ratios

Answers:

1. C
2. B
3. A

**MULTI-SITE STUDY ON THE IMPACT OF CYP3A4/P-GP INTERACTING MEDICATIONS ON
CLINICAL OUTCOMES IN RIVAROXABAN PATIENTS**

Elmor Pineda
Baylor Scott & White Health
Temple, TX

Learning Objectives:

1. Assess concomitant CYP3A4 inhibitor and P-gp inhibitor drug use and its association with outcomes in patients receiving rivaroxaban

Self-Assessment Questions:

1. Which of the following are medications that could potentially increase a patient's risk of bleed due to concomitant use with rivaroxaban therapy?
 - a. Clarithromycin
 - b. Verapamil
 - c. Carvedilol
 - d. Diltiazem
 - e. All of the above
2. In our single-site study, patients on rivaroxaban therapy taking CIMs were more likely to experience a bleed over time compared to CIM non-users.
 - a. True
 - b. False

Answers:

3. E
4. B

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