

OUTLINE

Antimicrobials

- Drug classes
- Pharmacokinetic Properties
 - Concentration-dependent killing
 - Time-dependent killing
 - Post-antibiotic effect
- Common interactions with other drugs

Antibacterial Allergies – Sulfa and Penicillin

- Define true allergy
- Sulfonamide antibiotics vs non-antibiotics
- Penicillin – Cephalosporin cross-sensitivity

Bacteria

- Differentiation
- Normal flora
- Common pathogens

Antibacterial Resistance–Contributing Factors

- Trends
- Mechanisms of resistance
- Contributing factors

Methicillin-Resistant Staphylococcus Aureus - Community versus Hospital Acquired

- Differentiating between CA- and HA-MRSA
- Current clinical practice guidelines
- Pharmacologic management

Enterobacteriaceae Resistance

- Extended Spectrum Beta-Lactamase (ESBL)
 - What are ESBLs
 - Pharmacologic management
- Carbapenem-Resistant Enterobacteriaceae (CRE)
 - What are CREs
 - Pharmacologic management

Urinary Tract Infections

- Bacterial Etiology, Signs and Symptoms and Diagnosis
- Cystitis and pyelonephritis
- Complicated and uncomplicated
- UTIs in pregnancy
- Treatment (IDSA Guideline Treatment Algorithm)
 - Acute
 - Recurrent and relapse

Clostridium Difficile Infection

- Risk factors
- Pharmacology management
- Fecal Transplantation
- Probiotics literature review

Community–Acquired Pneumonia

- Bacterial etiology
- Diagnosis
- Typical vs. atypical
- Treatment (IDSA/ATS Guidelines) and monitoring
 - Outpatient vs. inpatient
 - Empiric treatment

Healthcare–Associated Pneumonia

- Bacterial etiology
- Treatment (IDSA/ATS Guidelines)
- Treatment Controversy

Upper Respiratory Tract Infections

- Sinusitis and pharyngitis
 - Etiology (Viral vs. Bacterial)
 - Treatment
- Bronchitis and Pertussis
 - Etiology (Viral vs. Bacterial)
 - Treatment

Skin and Soft Tissue Infections

- Cellulitis
- Diabetic foot infections
- Bacterial etiology
 - Signs & symptoms
 - Treatment (IDSA Guidelines)
- Osteomyelitis
 - Acute vs. Chronic
 - Oral considerations

Strategies to Improve Patient Adherence

- IMS Model (Information-Motivation-Strategy)
- Major predictors of poor adherence to medication

Antibacterial Resistance–Prevention Strategies

- Mechanisms for drug resistance
- 12 steps to prevent antimicrobial resistance (CDC)
- Antibiotic stewardship

Emerging and Reemerging Viral Infections

- Animals as sources
- Drivers and ecological factors
- Modes of transmission
- Pharmacology management

Influenza

- Clinical features
- Diagnosis
- Pharmacology management

Immunizations (Adult)

- Types of Vaccines
- General recommendations
- Contraindications & precautions

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PHARMACOLOGY

OF INFECTIOUS DISEASES & IMMUNIZATIONS

for Advanced Practice Clinicians

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Monday, March 19, 2018

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PHARMACOLOGY

OF INFECTIOUS DISEASES & IMMUNIZATIONS

for Advanced Practice Clinicians

Featuring **Dr. Jason Cota, PharmD, MS**

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- Preventive strategies to limit antimicrobial resistance
- C. Difficile
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- Skin Infections
- Treatment (IDSA) guidelines
- Immunizations (Adult)

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PHARMACOLOGY OF INFECTIOUS DISEASES & IMMUNIZATIONS

Attend this seminar and learn proper prescribing, patient education and monitoring procedures for a variety of drug regimens used to treat common acute and chronic infectious diseases. Choosing an antibacterial agent can be challenging, given the plethora of drugs available on the market and the emerging trend in bacterial resistance.

You will learn the pharmacology of different classes of antimicrobials used to treat infectious disease states encountered in clinical practice. Discover the spectrums of activity, pharmacokinetic characteristics and parameters for monitoring therapeutic outcomes. Emphasis is placed on the new antimicrobials and advances in evidence-based treatment guidelines. You will leave this seminar better prepared to design appropriate and cost-effective drug regimens for improved therapeutic outcomes.

Leave this seminar better prepared to design appropriate and cost-effective drug regimens for improved therapeutic outcomes.

SPEAKER

Dr. Jason Cota, PharmD, MS, is an associate professor and the vice chair of the Pharmacy Practice Department at the University of the Incarnate Word Feik School of Pharmacy. He also has over 10 years of experience practicing as an infectious diseases clinical pharmacist at the San Antonio Military Medical Center, where he is a credentialed provider with prescriptive authority.

Dr. Cota received his Doctor of Pharmacy and a Master of Science in Advanced Pharmacy Practice with an emphasis in infectious diseases research from The University of Texas at Austin. In conjunction with his Master of Science degree program, he completed a two-year Specialty Practice Residency in Pharmacotherapy at The University of Texas Health Science Center at San Antonio with an emphasis in both infectious diseases and nephrology.

Dr. Cota is a member of the Society of Infectious Diseases Pharmacists and has given several presentations at national and international meetings. His research has focused on antimicrobial and antifungal drug dosing in patient populations that are subject to altered pharmacokinetics, including critically-ill burn patients and those receiving renal replacement therapy. He has published a number of articles and has co-authored several book chapters in the areas of infectious diseases and nephrology.

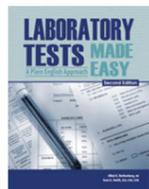
Speaker Disclosures:

Financial: Jason Cota is vice chair and associate professor at the University of the Incarnate Word Feik School of Pharmacy. He receives a speaking honorarium from Merck. Dr. Cota receives a speaking honorarium from PESI, Inc.
Nonfinancial: Jason Cota is a member of the Society of Infectious Diseases Pharmacists.

OBJECTIVES

1. Analyze the major classes of antibiotics and their pharmacokinetic characteristics.
2. Apply current evidenced-based approaches to select appropriate treatment regimens for common infections encountered in clinical practice.
3. Prescribe antimicrobials based on empiric dosing recommendations.
4. Plan goals of therapy and parameters for monitoring therapeutic response to antimicrobials.
5. Recommend specific antimicrobial therapeutic drug monitoring to maximize efficacy and minimize toxicities (e.g., vancomycin and aminoglycosides).
6. Develop preventative strategies to limit antimicrobial resistance.
7. Design patient and caregiver education on the proper use of antimicrobials.

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