



# Antimicrobial Stewardship J.W. Ruby Memorial Hospital

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# Antimicrobial Stewardship WVU Medicine

## **Mission:**

To ensure improved patient care through the appropriate utilization of antimicrobials with focused efforts to minimize antimicrobial resistance



# NATIONAL ACTION PLAN FOR COMBATING ANTIBIOTIC-RESISTANT BACTERIA

MARCH 2015



# Strategies

- Education and guidelines
- Formulary restriction
- De-escalation
- Optimizing duration
- Prolonged infusion of beta-lactams
- Antibiotic cycling
- IV to PO conversion

# Education/Guidelines

- WVUM Antibiotic Guidance Website-  
Useful Links (EPIC)
- Comprehensive Antimicrobial Guide-  
Pocket card

## Useful Links

[Analgesic Guidelines](#)

[Drug Shortages](#)

[Pharmacy Dept Homepage](#)

[WVUH Antimicrobial Guidance Website](#)

[WVUH Hazardous Medication Policy](#)

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[Ask A Drug Information Expert](#)

[Clinical Pharmacology](#)

[CONNECT](#)

[Controlled Substances Rx Database](#)

[The Journal of the American Medical Association \(JAMA\)](#)

[Medline / PubMed](#)

[MedSite](#)

[Micromedex](#)

[The New England Journal of Medicine](#)

[On-Call](#)

[Patient Safety Net](#)

[Up To Date Clinical Info](#)

[WVU Hospitals](#)

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[Epic/Clarity Report Request Form](#)

# Indication for Use Requirement

levoFLOXacin (LEVAQUIN) tablet ✔ Accept ✖ Ca

Reference Links: [1. Click here for Drug Information from UpToDate](#) [2. WVUH Empiric Antimicrobial Guide](#) [3. WVUH Intra-abdominal Infection Guidelines](#)  
[4. WVUH HCAP \(non-ICU\) Guidelines](#) [5. WVUH UTI Guidelines](#)

Order Inst.: This  
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Dose:   
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Route:   
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Frequency:   
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Item Select

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Title
Surgical Prophylaxis
Bloodstream Infection
Bone and Joint Infection
Central Nervous System Infection
Cystic Fibrosis Exacerbation
Diabetic Foot Infection
Empiric Therapy of Febrile Neutropenia
Empiric Therapy - Unclear Source
Endocarditis
Intra-abdominal
Obstetric-related (GBS, PPRM, chorioamnionitis, etc)
Pneumonia-CAP
Pneumonia-Other (Aspiration, Healthcare Associated, Compromised patient and/or non-pulmonary infection)
R/O Sepsis-NICU
Skin/Soft Tissue Infection
Urinary Tract Infection
C.Difficile Infection
Other (see comment)

18 items loaded.

# Formulary Restriction

- Agents are restricted based on resistance, adverse effects, and/or high cost
- Restricted antimicrobials:
  - Ceftazidime/avibactam (Avycaz)
  - Ceftolozane/tazobactam (Zerbaxa)
  - Dalbavancin
  - Fidaxomicin
  - Ciprofloxacin
  - Levofloxacin
  - Meropenem



# De-escalation

- 48-hour “Antibiotic Timeout”

**Antibiotic Timeout**

This patient has been on antibiotic therapy for 48 hours; please assess for necessity of continuing therapy.

Acknowledge reason:

- 72-hour alert reminder for de-escalation

**Need to Evaluate Broad-Spectrum Antibiotics**

This patient has been on a broad-spectrum anti-Pseudomonal Gram-negative antibiotic for 72 hours.

- piperacillin-tazobactam (ZOSYN)

Please evaluate the patient for de-escalation of therapy to ampicillin-sulbactam (UNASYN) if appropriate.

Acknowledge reason:

# Other Strategies

- Prolonged infusion of beta-lactams
  - Using PK/PD principles to dose and administer time-dependent antibiotics
  - cefepime, ceftazidime, meropenem, and piperacillin/tazobactam
- Antibiotic cycling (Zosyn, Cefepime)
  - Scheduled rotation of antibiotics
  - ICU, BMT, and Pediatric Oncology patients
- IV to PO per protocol
- Pharmacist dosing per protocol of vancomycin and aminoglycosides

# Potential Benefits

- Improved patient outcomes
- Reduced adverse events, including *Clostridium difficile* infections
- Improved antimicrobial susceptibilities
- Optimizing resource utilization

# Measuring Outcomes

- Antimicrobial usage data
- Clostridium difficile rates
  
- Coming in near future:
  - Abx ordering feedback
    - individual physician data

# Our Team

- **John Guilfoose, MD, Chair**  
Infectious Diseases
- **Lisa Keller, Pharm.D., Vice Chair**  
Pharmacy-Antimicrobial Stewardship
- **Aaron Cumpston, Pharm.D.**  
Bone Marrow Transplant
- **Rachel Hudik, NP**  
APPs/Med Hospitalists
- **Christine Kincaid, MD**  
Outpatient/Pediatrics
- **P. Rocco LaSala, MD**  
Microbiology/Pathology
- **Allison Lastinger, MD**  
Infectious Diseases
- **Michelle Mitchell, MD**  
Pediatric Infectious Diseases
- **Meera Mehta, Pharm.D.**  
Pharmacy-OPAT
- **Kathryn Moffett, MD**  
Pediatric Infectious Diseases
- **Kathy Nigh, RN**  
Infection Prevention
- **H. Carl Palmer, MD**  
Medicine
- **Karen Petros, Pharm.D.**  
Surgical ICU
- **Douglas Slain, Pharm.D.**  
Infectious Diseases
- **Michael Sweet, Pharm.D.**  
Quality Services

# Our Team

- All of you !!!
- Things you can do day to day as Residents:
  - Pay attention to the Pop-up alerts
  - Read ordering instructions (at least one 😊)
  - Use the Antibiotic Guidance link on EPIC
  - Utilize Microbiology lab / Diagnostic tests
  - Clarify antibiotic allergies (esp. B-lactams)
  - CALL TRANSFERRING HOSPITALS MICRO LAB

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