Wadley Regional Medical Center

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Antimicrobial Stewardship **Newsletter**

The Antimicrobial Stewardship Committee is a subcommittee of the Wadley Pharmacy and Therapeutics Committee

CMS Conditions of Participation and Joint Commission Standards · New Antibiogram · New Gram-negative Panel

Updated Empiric Antibiotic Guidelines · New Fluoroquinolone Boxed Warning · Oral Linezolid Price Decrease

CMS CONDITIONS OF PARTICIPATION AND JOINT COMMISSION STANDARDS REGARDING ANTIMICROBIAL STEWARDSHIP

The following are standards applicable to prescribers:

- Practitioners must document in the medical record or during order entry an indication for all antibiotics.
- Practitioners must review the appropriateness of any antibiotics prescribed after 48 hours from the initial orders.
- The hospital educates staff and licensed independent practitioners involved in antimicrobial ordering, dispensing, administration, and monitoring about antimicrobial resistance and antimicrobial stewardship practices.
- The hospital educates patients, and their families as needed, regarding the appropriate use of antimicrobial medications, including antibiotics.

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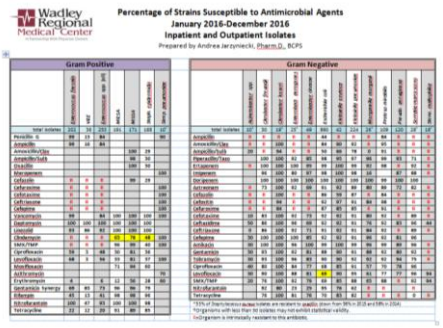
NEW ANTIBIOGRAM

The new antibiogram for January 2016 to December 2016 is now available with two important changes from previous antibiograms. Isolates are no longer separated into urine and non-urine isolates, allowing for more organisms to be included in the antibiogram. Also, organisms with intrinsic resistance to an antibiotic are now designated with an "**R**". Rates of *Staphylococcus aureus* resistance to oxacillin have remained stable at 53% compared to 56% in 2015. Resistance to levofloxacin among *Escherichia coli* and *Enterococcus faecalis* remains high with susceptibilities of 69% and 68%, respectively.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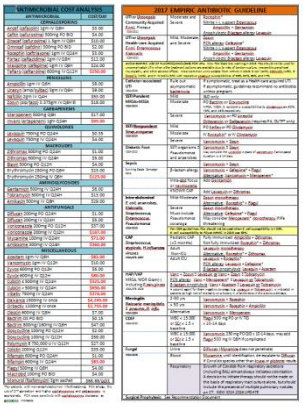
Percentage of Strains Susceptible to Antimicrobial Agents
January 2016-December 2016
Inpatient and Outpatient Isolates
Prepared by Andrea Jarzyniecki, Pharm.D., BCPS

Gram Positive | Gram Negative

The anti-biogram will be posted in provider work areas, will be posted in the "for physicians" section of the Wadley intranet page, and hard copies will be left in provider mailboxes.

UPDATED EMPIRIC ANTIBIOTIC GUIDELINES

The Empiric Antibiotic Guideline has been updated for 2017. The new 2016 Infectious Diseases Society of America (IDSA) and the American Thoracic Society Hospital-Acquired and Ventilator-Associated Pneumonia guidelines were reviewed, and the Empiric Antibiotic Guideline has been changed to reflect the recommendation that a second agent for gram-negative coverage (e.g. levofloxacin or tobramycin) is only indicated in patients with a high mortality risk or a history of intravenous antibiotics in the previous 90 days. Empiric use of fluoroquinolones for intra-abdominal infections and urinary tract infections is also addressed. IDSA guidelines recommend fluoroquinolones should not be used empirically for intra-abdominal infections if local *E. coli* susceptibilities are < 90%. *E. coli* susceptibility to fluoroquinolones was 69% in 2016 and should not be used empirically in these infections. Fluoroquinolones are also poor choices for urinary tract infection empiric coverage due to low susceptibilities among common urinary pathogens. The most common urinary pathogens at Wadley in 2016 were *E. coli* (44%), *Klebsiella* (10%), *E. faecalis* (10%), and *Proteus mirabilis* (5%) with respective levofloxacin susceptibilities of 69%, 95%, 68%, and 77%. The guideline will be posted with the anti-biogram.


ANTIMICROBIAL COST ANALYSIS

2017 EMPIRIC ANTIBIOTIC GUIDELINE

ANTIBIOTIC INDICATIONS

According to the CMS Conditions of Participation, every antibiotic ordered must have an indication clearly discernible from the medical record or documented at the time of order entry. To meet this Condition of Participation, the indication should be included in all written antibiotic orders or in the comments section of antibiotics ordered electronically. Including indications also allows pharmacists to more appropriately dose antibiotics when consulted or when adjusting dosing for renal function.

NEW BOXED WARNING FOR FLUOROQUINOLONES

In July 2016, the Food and Drug Administration approved labeling changes for all fluoroquinolones to include a new boxed warning regarding serious, potentially permanent disabling side effects involving tendons, muscles, joints, nerves, and the central nervous system. The warning states that the benefits of fluoroquinolone use are generally outweighed by risks of adverse effects in treatment of acute bacterial sinusitis, acute bacterial exacerbation of chronic bronchitis, and uncomplicated urinary tract infections if other treatment options are available.

ORAL LINEZOLID PRICE DECREASE

The price of oral linezolid has decreased to just $5.00 per day, making it a cost effective oral option for MRSA infections. Intravenous linezolid is still a more expensive option at $80.00 per day, however due to linezolid's 100% oral bioavailability, IV linezolid is not necessary in most patients able to take oral medications. Oral linezolid is now a cheaper option than vancomycin, but its use may be limited in some patients due to drug interactions and adverse effects. Linezolid is an MAO inhibitor and should not be given to patients taking selective serotonin reuptake inhibitors, serotonin/norepinephrine reuptake inhibitors, tricyclic antidepressants, or other medications with serotonergic properties due to the risk of serotonin syndrome. Linezolid also causes thrombocytopenia, especially when used for more than 2 weeks, thus would not be a good option for patients with low platelets or patients requiring more than 2 weeks of antimicrobial therapy. Linezolid should also be used judiciously as linezolid is one of a limited number of antibiotics that may be effective for Vancomycin-Resistant *Enterococcus.*

NEW GRAM-NEGATIVE PANEL

A new gram-negative panel has been selected and is currently undergoing quality control testing by the microbiology laboratory. The most important change with the new panel is susceptibility will now be tested for meropenem instead of doripenem. This new panel will also allow adherence to new Clinical and Laboratory Standards Institute guidelines concerning susceptibility breakpoints.

ANTIBIOTIC SUSCEPTIBILITY REPORTING AND SUPPRESSION

Antibiotics reported and suppressed on susceptibility panels for specific organisms are being reviewed for appropriateness. It is possible intrinsically resistant organisms are erroneously reported as susceptible to an antibiotic due to in vitro activity that does not translate to clinical efficacy. Antibiotics will be suppressed on the susceptibility panel if the organism is intrinsically resistant or if the antibiotic is not an appropriate treatment option despite the isolate reporting as susceptible to that antibiotic. If any antibiotics currently being suppressed are found to be potential treatment options for that organism, those antibiotics will start being reported.