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PALOS HOSPITAL

Emergency Department

ANTIMICROBIAL SUSCEPTIBILTY REPORT (ANTIBIOGRAM)

January 1, 2020 through December 31, 2020

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EMERGENCY DEPARTMENT 2020

GRAM POSITIVE ISOLATE SUSCEPTIBILITY (%)										
Organism (number of isolates)	**Ampicillin**	**Penicillin**	**Oxacillin***	**Clindamycin**	**Daptomycin** (ID Restricted)	**Linezolid** (ID/Pulm/Crit Care Restricted)	**Tetracycline**	**Tigecycline** (ID Restricted)	**Trimethoprim/ Sulfamethoxazole**	**Vancomycin**
Enterococcus group (163)	82	---	---	---	100	98	0	96	---	78
Staphylococcus aureus Group (205)	---	---	53	57	100	100	79	100	87	100
Staphylococcus epidermidis (Coagulase Negative) (32)	---	---	22	41	97	100	81	100	66	100

--- Denotes not recommended for treatment or not tested
* Oxacillin reflects methicillin for laboratory testing

EMERGENCY DEPARTMENT 2020

GRAM NEGATIVE ISOLATE SUSCEPTIBILITY (%)														
Organism (number of isolates)	**Amikacin**	**Ampicillin**	**Aztreonam**	**Cefazolin**	**Cefepime**	**Ceftriaxone**	**Ciprofloxacin**	**Ertapenem (ID Restricted)**	**Gentamicin**	**Meropenem (ID Restricted)**	**Piperacillin/ tazobactam**	**Tigecycline (ID Restricted)**	**Tobramycin**	**Trimethoprim/ sulfamethoxazole**
Enterobacter Group (34)	100	---	70	---	82	64	94	100	100	97	70	96	97	85
Escherichia coli Group (774)	100	52	90	47	90	89	79	99	91	99	94	100	91	73
Klebsiella Group (231)	98	0	80	36	83	80	87	100	93	96	88	100	89	80
Proteus Group (124)	100	71	84	26	89	89	68	100	90	100	100	0	89	79
Pseudomonas aeruginosa (110)	98	---	74	---	97	---	86	---	93	96	94	0	98	---

Antibiogram background:

- An antibiogram is a collection of data that summarizes the percent of individual bacterial pathogens that are susceptible to tested antimicrobial agents and is designed to help direct empiric therapy.
- This antibiogram is specific to microbiology cultures obtained in the Emergency Department.
- Unless otherwise specified, organisms are grouped per genus.
- Organism groups with 30 or more isolates are reported. If less than 30 isolates are reported, use caution extrapolating results: data may be inconclusive for therapeutic efficacy and empiric therapy selection.

Antimicrobial Stewardship Pearls

- Initiate empiric therapy based on the most likely pathogen.
- Beta-lactam therapy (e.g. penicillins, cephalosprins) is preferred.
- Evaluate patients' allergy history: most patients with a penicillin allergy will tolerate a cephalosporin or carbapenem.
    - Aztreonam is not a preferred first-line agent due to poor susceptibility.
    - Beta lactams exhibit more rapid bactericidal activity compared to Vancomycin.
    - Avoid empiric use of Fluoroquinolones when possible. due to their safety profile and decreased susceptibility.
- For select organisms, amoxicillin susceptibility can be inferred from ampicillin and cephalexin susceptibility can be inferred from cefazolin.
- Document a clear plan of care regarding antibiotic therapy including anti-infective agent names, indication/assessment of condition and anti-infective plan.

COVID Pneumonia:

Due to the low incidence of bacterial co-infection (1.55 – 5%), antibiotics are not recommended unless leukocytosis, focal lobar infiltrate, or clinical decompensation are present. If considering antibiotics, consider serial procalcitonin.