

Antibiogram

This document is antimicrobial susceptibility testing results of isolates from various clinical specimens submitted at Department of Main laboratory Jiinah post graduate Medical center karachi. Data is drawn from patients directly reporting to JPMC as well as from referred cases from others hospitals . This will help the clinicians to know about most prevalent microorganisms in our clinical settings and choosing empirical treatment against suspected organisms. In addition, this document can also aid in determining the trend development of antimicrobial resistance among the clinical isolates.

How to use this Antibiogram?

- The Black box heading indicates the clinical sample for which the antibiotic data is represented in that table.
- **The figures in the boxes represent the % of RESISTANT isolates against particular drug.** For example in the Pus/ Pus swab/ Tissue table,.
- **NT** means the isolate has **Not** been **Tested** against the drug
- **IR** means the isolate is **Intrinsically Resistant** against the drug and neither be used clinically nor requires testing.
- All sensitivity results are according to Clinical Laboratory Standard Institute (CLSI) 2020, 30th Ed Supp. M100 except Tigecycline (EUCAST 2020), Vancomycin and Polymyxin B.

Disclaimer

- CLSI guideline M-39-A3 suggests making antibiogram when isolates number (n) is >30 . In case where n is <30 , the interpretation may be impaired due to small number.

Respiratory Specimen
Sputum, Tracheal Aspirate, EB Washing, NBL, Broncho alveolar lavage
Pus/ Pus Swab/ Tissue, body fluids

Total Number=(5860) growth negative.(3458) Growth positive(2402)%(41)
Antibiotics Percentage of resistance.

| Gram Positive Organisms | n | OPD | IPD | PEN | CLOX | AMC | CIP | E | SXT | D.A | T.E | LEV | LNZ | GEN | FD | VA | TEC | C | | |
|------------------------------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|
| Staphylococcus aureus | 891 | 604 | 223 | NT | 66 | NT | 56 | 51 | 19 | 15 | 35 | NT | 0 | 15 | 26 | 1 | NT | 3 | | |
| Streptococci spp | 41 | 12 | 29 | 7 | NT | NT | 32 | 46 | 5 | 29 | 39 | 0 | 0 | NT | NT | 0 | NT | 0 | | |
| Beta-hemolytic, Streptococci | 74 | 70 | 4 | 1 | NT | NT | 47 | 47 | 0 | 31 | 50 | 0 | O | NT | NT | 1 | NT | 12 | | |
| Gram Negative Organisms | n | OPD | IPD | AMP | AMC | CRO | CFM | CAZ | TZP | IMP | MEM | CIP | SXT | TOB | AK | FEP | SCF | T.E | P.B | FOS |
| Escherichia coli | 123 | 43 | 80 | NT | 66 | 66 | 67 | NT | 40 | 2 | NT | 81 | 56 | 33 | 16 | 46 | 37 | 31 | 0 | 0 |
| Klebsiella pneumoniae | 258 | 64 | 193 | IR | 67 | 82 | 85 | NT | 46 | 35 | NT | 75 | 63 | 21 | 25 | 39 | 40 | 78 | 0 | 9 |
| Acinetobacter species | 130 | 27 | 103 | IR | IR | 84 | NT | 58 | 82 | 83 | NT | 78 | 64 | 41 | 78 | 74 | 76 | 92 | 0 | 0 |
| Pseudomonas aeruginosa | 758 | 529 | 229 | IR | IR | IR | NT | 17 | 8 | 10 | NT | 27 | IR | 15 | 13 | 17 | IR | NT | 0 | 0 |

Blood. Total number 4,208. growth negative (3561) growth positive (647)
Over blood specimen (Positive %15.37)

Antibiotics resistance percentage

| Gram-Negative Organisms | n | OPD | IPD | AMP | AMC | CFM | CRO | FEP | CAZ | TZP | IMP | MEM | CIP | SXT | TOB | AK | T.E | SCF | PB | FOS |
|---|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|----|--------------|-----|----|-----|
| Acinetobacter species | 63 | 02 | 61 | IR | IR | 76 | NT | 73 | 73 | 57 | 62 | NT | 70 | 70 | 41 | 48 | 76 | 49 | 49 | 32 |
| Enterobacter spp | 136 | 10 | 126 | NT | 84 | 88 | 87 | 85 | NT | 54 | 51 | NT | 80 | 79 | 49 | 34 | 95 | 57 | NT | 7 |
| Salmonella Typhi (Blood isolates only) | 58 | 38 | 20 | 71 | NT | NT | 67 | NT | NT | NT | NT | 0 | 71 | 71 | Chloramphenicol | | Azithromycin | | | |
| Pseudomonas aeruginosa | 44 | 04 | 40 | IR | IR | NT | IR | 25 | 27 | 14 | 27 | NT | 32 | NT | 14 | 14 | NT | NT | NT | NT |
| Klebsella pneumonia | 127 | 17 | 110 | NT | 72 | 87 | 83 | 77 | NT | 46 | 39 | NT | 76 | 76 | 38 | 36 | 90 | 46 | NT | 6 |
| Escherichia coli | 121 | 06 | 115 | NT | 65 | 83 | 78 | 72 | NT | 39 | 27 | NT | 74 | 77 | 17 | 16 | 79 | 45 | NT | 9 |
| Gram-positive Bacteria | n | 10 | 27 | CLOX | VA | E | DA | F.D | C | T.E | SXT | LZD | CIP | NT | NT | NT | NT | NT | NT | NT |
| Staphylococcus aureus | 37 | | | 70 | 0 | 59 | 22 | 46 | 8 | 54 | 51 | 0 | 62 | NT | NT | NT | NT | NT | NT | NT |

| KEY | |
|-----|-------------------------|
| - | Number of isolates |
| IR | Intrinsic Resistance |
| NT | Not tested |
| AMC | Co-Amoxi Clav |
| AMP | Ampicillin |
| AK | Amikacin |
| C | Chloramphenicol |
| CAZ | Ceftazidime |
| CIP | Ciprofloxacin |
| FEP | Cefipime |
| CLI | Clindamycin |
| CLO | Cloxacillin |
| CRO | Ceftriaxone |
| T.E | Tetra cycline |
| ERY | Erythromycin |
| FD | Fusidic acid |
| FOS | Fosfomycin |
| CN | Gentamicin |
| IMP | Imipenem |
| CFM | Cefixime |
| LZD | Linezolid |
| MEM | Meropenem |
| TOB | Tobramycin |
| F | Nitrofurantoin |
| PB | Polymyxin-B |
| PEN | Penicillin |
| SXT | Co-trimoxazole |
| LEV | Levofloxacin |
| TZP | Piperacillin-Tazobactam |
| VA | Vancomycin |
| | Gram-negative |
| | Gram-positive |

Antibiotics Percentage of Resistance %

Total number. 8744. Growth negative (6794) .positive growth. (1950)

Urine C/S (Positive) (22.30 %)

| Gram Positive Organism | <i>n</i> | OPD | IPD | PEN | | AMP | | CIP | | | | LNZ | | VAN | | F | FOS | | |
|-------------------------|----------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|
| Enterococcus species | 107 | 37 | 70 | 40 | | 8 | | 79 | | | | 0 | | 5 | | 19 | 6 | | |
| Gram Negative Organisms | <i>n</i> | | | AMP | AMC | CFM | CRO | CAZ | TZP | IMP | MEM | CIP | SXT | AK | TOB | F | FOS | NOR | FEP |
| Enterobacter spp | 74 | 44 | 50 | NT | 80 | 80 | 78 | NT | 31 | 26 | NT | 61 | 57 | 20 | 26 | 39 | 22 | NT | NT |
| Pseudomonas aeruginosa | 129 | 78 | 22 | IR | IR | NT | IR | 31 | 21 | 29 | NT | 55 | IR | 26 | 36 | NT | NT | NT | NT |
| Escherichia coli | 874 | 604 | 2700 | NT | 62 | 76 | 75 | NT | 28 | 7 | NT | 57 | 67 | 19 | 30 | 9 | 8 | 68 | 66 |
| Klebsiella pneumoniae | 180 | 155 | 25 | NT | 76 | 79 | 77 | NT | 31 | 8 | NT | 44 | 68 | 21 | 32 | 30 | 11 | 61 | 51 |

| KEY | |
|-----|-------------------------|
| - | Number of isolates |
| IR | Intrinsic Resistance |
| NT | Not tested |
| AMC | Co-Amoxi Clav |
| AMP | Ampicillin |
| AK | Amikacin |
| C | Chloramphenicol |
| CAZ | Ceftazidime |
| CIP | Ciprofloxacin |
| FEP | Cefipime |
| CLI | Clindamycin |
| CLO | Cloxacillin |
| CRO | Ceftriaxone |
| T.E | Tetra cycline |
| ERY | Erythromycin |
| FD | Fusidic acid |
| FOS | Fosfomycin |
| CN | Gentamicin |
| IMP | Imipenem |
| CFM | Cefixime |
| LZD | Linezolid |
| MEM | Meropenem |
| TOB | Tobramycin |
| F | Nitrofurantoin |
| PB | Polymyxin-B |
| PEN | Penicillin |
| SXT | Co-trimoxazole |
| LEV | Levofloxacin |
| TZP | Piperacillin-Tazobactam |
| VA | Vancomycin |
| | Gram-negative |
| | Gram-positive |

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