

NASF Private Sector Antibiotic Susceptibility Data

Jan-June 2005

S. pneumoniae: CSF

| | | Percentage | | | | | | | |
|---------------------------------------------------------------|-------------|------------|----------|-----------|----------|----------|----------|----------|----------|
| (Number of laboratories) | | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total number of isolates | | 8 | 6 | 10 | 2 | 3 | 5 | 0 | 0 |
| Penicillin~ | Susceptible | 50 | 25 | 25 | 50 | 33 | 60 | | |
| | IR | 25 | 75 | 75 | 50 | 67 | 40 | | |
| | HR | 25 | - | - | - | - | - | | |
| 3 rd generation cephalosporins (parenteral)* | Susceptible | 100 | 100 | 100 | 100 | 100 | 100 | | |
| | IR | - | - | - | - | - | - | | |
| | HR | - | - | - | - | - | - | | |

~ Penicillin breakpoints: NCCLS S \leq 0.06 IR 0.12-1 HR \geq 2

* 3rd Cephalosporins : NCCLS S \leq 0.5 IR 1 HR \geq 2

***S.pneumoniae*: URTI**

| | | Percentage | | | | | | | |
|---------------------------------------------------------|-------------|------------|------------|-----------|------------|-----------|----------|-----------|----------|
| (Number of laboratories) | | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total number of isolates | | 442 | 581 | 90 | 257 | 31 | 3 | 37 | 0 |
| Penicillin~ | Susceptible | 23 | 29 | 25 | 36 | 32 | 67 | 78 | |
| | IR | 66 | 69 | 65 | 56 | 68 | 33 | 9 | |
| | HR | 11 | 2 | 10 | 8 | - | - | 13 | |
| Telithromycin - susceptible | | 100 | 100 | 100 | 100 | 100 | 100 | NT | |
| Erythromycin – susceptible | | 46 | 48 | 53 | 58 | 23 | 50 | 61 | |
| 3 rd generation cephalosporins (parenteral)* | Susceptible | 90 | 88 | 97 | 93 | 86 | 67 | 100 | |
| | IR | 9 | 12 | 3 | 6 | 14 | 33 | - | |
| | HR | 1 | - | - | 1 | - | - | - | |
| Quinolones | Levo | 100# | NT | 100 | NT | NT | NT | NT | |
| | Moxi | 100 | 100 | 100# | 100 | 100 | 100 | 100 | |
| | Gati | 100 | 100 | 100# | 100 | 100 | 100 | 100 | |

~ Penicillin breakpoints: NCCLS S \leq 0.06 IR 0.12-1 HR \geq 2

* 3rd Cephalosporins : NCCLS S \leq 0.5 IR 1 HR \geq 2

1 laboratory only, NT: Not tested

***S. pneumoniae*: LRTI**

| | | Percentage | | | | | | | |
|---------------------------------------------------------|-------------|------------|------------|------------|------------|-----------|----------|-----------|----------|
| (Number of laboratories) | | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total number of isolates | | 255 | 979 | 108 | 459 | 41 | 8 | 45 | 4 |
| Penicillin~ | Susceptible | 76 | 51 | 88 | 86 | 100 | 100 | 72 | 50 |
| | IR | 24 | 47 | 7 | 8 | - | - | 7 | 25 |
| | HR | - | 2 | 5 | 6 | - | - | 21 | 25 |
| Telithromycin - susceptible | | 100 | 100 | 100 | 99 | 100 | 100 | NT | NT |
| Erythromycin – susceptible | | 56 | 45 | 58 | 55 | 52 | 63 | 36 | 100 |
| 3 rd generation cephalosporins (parenteral)* | Susceptible | 99 | 98 | 100 | 88 | 100 | 100 | 100 | 50 |
| | IR | 1 | 2 | - | 12 | - | - | - | 50 |
| | HR | - | - | - | - | - | - | - | - |
| Quinolones | Levo | 100# | NT | 100 | NT | NT | NT | NT | 100 |
| | Moxi | 100 | 100 | 100# | 100 | 100 | 100 | 100 | 100 |
| | Gati | 100 | 100 | 100# | 100 | 100 | 100 | 100 | 100 |

~ Depending on laboratory, NCCLS penicillin or suggested IDSA penicillin breakpoints: S \leq 1 IR 2 HR \geq 4

* 3rd Cephalosporins NCCLS S \leq 1 IR 2 HR \geq 4

1 laboratory only, NT: Not tested

***S. pneumoniae*: Blood**

| | | Percentage | | | | | | | |
|---------------------------------------------------------|-------------|------------|-----------|-----------|-----------|----------|-----------|----------|----------|
| (Number of laboratories) | | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total number of isolates | | 106 | 39 | 60 | 14 | 7 | 17 | 7 | 1 |
| Penicillin~ | Susceptible | 64 | 77 | 34 | 73 | 80 | 81 | 78 | 100 |
| | IR | 33 | 20 | 63 | 23 | 20 | 19 | 22 | - |
| | HR | 3 | 3 | 3 | 4 | - | - | - | - |
| Telithromycin - susceptible | | 100# | 100 | 100 | 100 | 100 | 100 | NT | NT |
| Erythromycin – susceptible | | 84 | 78 | 76 | 73 | 80 | 82 | 83 | 100 |
| 3 rd generation cephalosporins (parenteral)* | Susceptible | 96 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| | IR | 4 | - | - | - | - | - | - | - |
| | HR | - | - | - | - | - | - | - | - |
| Quinolones | Levo | 100# | NT | 100 | NT | NT | NT | NT | 100 |
| | Moxi | 97 | 100 | 100# | 100# | 100 | 94 | 100 | 100 |
| | Gati | 97 | 100 | 100# | 100# | 100 | 94 | 100 | 100 |

~ Depending on laboratory, NCCLS penicillin or if isolated from patients with CAP suggested IDSA penicillin breakpoints

* 3rd Cephalosporins NCCLS S \leq 1 IR 2 HR \geq 4

1 laboratory only, NT: Not tested

~ Penicillin breakpoints: NCCLS S \leq 0.06 IR 0.12-1 HR \geq 2

* 3rd Cephalosporins : NCCLS S \leq 0.5 IR 1 HR \geq 2

Haemophilus influenzae

| | Percentage Susceptible | | | | | | | |
|------------------------------------|------------------------|-------------|------------|------------|-----------|-----------|------------|-----------|
| (Number of laboratories) | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total of isolates | 872 | 1817 | 490 | 560 | 95 | 26 | 155 | 27 |
| Macrolides / azalides | 100 | 100 | 78# | 98 | 100 | 100 | 99 | 76 |
| Telithromycin | 100 | 100 | 100 | 99 | 94 | 100 | NT | NT |
| Cotrimoxazole | 54 | 57 | 60# | 53 | 65 | 15 | 49 | 52 |
| B-Lactamase production (incidence) | 9 | 8 | 12 | 8 | 6 | 12 | 7 | 0 |
| BLNAR % (incidence) | 1 | 3 | 1 | - | - | NT | 0 | 0 |

Moraxella catarrhalis

| | | | | | | | | |
|------------------------------------|------------|------------|------------|------------|-----------|----------|-----------|----------|
| (n = Total of isolates) | 347 | 835 | 138 | 235 | 35 | 8 | 48 | 0 |
| Macrolides / azalides | 97 | 100 | 78# | 99 | 100 | 100 | 94 | |
| Telithromycin | 100 | 100 | 100 | 100 | 100 | 100 | NT | |
| Cotrimoxazole | 18 | 42 | 48# | 54 | 21 | 0 | 75 | |
| B-Lactamase production (incidence) | 82 | 96 | 75 | 84 | 89 | 87 | 98 | |

1 laboratory only

NT: Not tested

***E. coli* (URINE)**

| (Number of laboratories) | Percentage Susceptible | | | | | | | |
|------------------------------------------------------|------------------------|-------------|-------------|-------------|------------|------------|------------|------------|
| | Jhb (1) | Pta (3) | Dbn (2) | CT (1) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total of isolates | 9239 | 6808 | 3661 | 3521 | 635 | 311 | 540 | 423 |
| ampicillin | 28 | 30 | 32 | 25 | 21 | 24 | NT | 0 |
| 1 st generation cephalosporins | 82 | 62 | 82 | 91 | NT | NT | NT | 91 |
| 2 nd generation cephalosporins | 95 | 94 | 90 | 97 | 72 | 99 | 97 | 96 |
| Parenteral 3 rd generation cephalosporins | 99 | 98 | 93# | 99# | 94 | 99 | 99 | 98 |
| Amox / clavulanate | 88 | 84 | 84 | 91 | 78 | 72 | 84 | 88 |
| Ciprofloxacin | 89 | 87 | 88 | 82 | 93 | 91 | 70 | 93 |
| Levofloxacin | 88 | 89# | 82# | 82 | 93 | 91 | NT | 91 |

1 laboratory only NT: Not tested

***E. coli* (NON-URINE)**

| | Percentage Susceptible | | | | | | | |
|------------------------------------------------------|------------------------|-------------|------------|------------|------------|------------|------------|---------|
| (Number of laboratories) | Jhb (3) | Pta (3) | Dbn (2) | CT (1) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total of isolates | 2089 | 1185 | 710 | 633 | 108 | 112 | 197 | |
| ampicillin | 26 | 22 | 27 | 34 | 19 | 29 | 33 | |
| 1 st generation cephalosporins | 40 | 38 | 58 | NT | NT | 94 | NT | |
| 2 nd generation cephalosporins | 90 | 70 | 79 | 92 | 78 | 94 | 92 | |
| Parenteral 3 rd generation cephalosporins | 95 | 90 | 86 | 96 | 96 | 95 | 97 | |
| Amox / clavulanate | 80 | 62 | 82 | 81 | 70 | 83 | 83 | |
| Ertapenem | 100 | 98 | 98 | 100# | 100 | 100 | 100 | |
| Ciprofloxacin | 84 | 77 | 82 | 81 | 93 | 80 | 84 | |
| Levofloxacin | 84 | 79# | 79# | 81 | 93 | 80 | NT | |

1 laboratory only

NT: Not tested

1 laboratory only

NT: Not tested

***Enterobacter spp* (All sources)**

| Percentage Susceptible | | | | | | | | |
|------------------------------|-------------|-------------|------------|------------|------------|-----------|------------|-----------|
| (Number of laboratories) | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total of isolates | 1229 | 1183 | 526 | 478 | 361 | 45 | 101 | 17 |
| Cefepime | 90 | 80 | 86 | 86 | 60 | 100 | 94 | 100 |
| Pip/tazobactam | 85 | 52 | 89 | 81 | 44 | 89 | 93 | 100 |
| Amikacin | 94 | 94 | 94 | 84 | 74 | 100 | 81 | 100 |
| Meropenem/Imipenem | 100 | 99 | 96 | 100 | 95 | 100 | 98 | 100 |
| Ertapenem | 99 | 98 | 94 | 100 | 95 | 97 | 98 | NT |
| Ciprofloxacin | 94 | 94 | 87 | 82 | 83 | 100 | 93 | 100 |
| Levofloxacin | 94 | 92# | 79# | 79# | 83 | 1007 | NT | 95 |

1 laboratory only

NT: Not tested

S. aureus: Bloodcultures

| Percentage Susceptible | | | | | | | | |
|------------------------------|------------|------------|------------|-----------|----------|----------|-----------|----------|
| (Number of laboratories) | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total of isolates | 211 | 117 | 200 | 59 | 9 | 7 | 16 | 3 |
| Cloxacillin | 57 | 68 | 69 | 72 | 89 | 86 | 88 | 100 |
| Cotrimoxazole | 81 | 80 | 63 | 83 | 78 | 86 | NT | 67 |
| Fusidic acid | 97 | 98 | 95# | 99 | 11 | 86 | 94 | 100 |
| Rifampicin | 88 | 95# | 74# | 95 | 100 | 86 | NT | NT |
| Amikacin | 65 | NT | 88# | 67# | NT | 100 | NT | NT |
| Gentamycin | 82 | 73# | 50 | 92# | 67 | NT | NT | NT |
| Teicoplanin | 99 | 99 | 100 | 100# | NT | NT | 100 | NT |
| Vancomycin | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Linezolid | 100 | 100 | 100 | 100 | 100 | NT | 100 | NT |

***P. aeruginosa* (All sources)**

| Percentage Susceptible | | | | | | | | |
|------------------------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|
| (Number of laboratories) | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
| n = Total of isolates | 2269 | 2934 | 1022 | 1106 | 196 | 121 | 212 | 120 |
| Ceftazidime | 82 | 49 | 82 | 88 | 98 | 98 | 85 | 91 |
| Cefepime | 80 | 60 | 77 | 85 | 88 | 96 | 83 | 94 |
| Pip/tazobactam | 84 | 52 | 80 | 85 | 96 | 97 | 88 | 94 |
| Amikacin | 78 | 62 | 79 | 88 | 87 | 93 | 88 | 96 |
| Tobramycin | 76 | 60 | 65# | 83 | 82 | 87 | 89 | NT |
| Meropenem | 79 | 63 | 88 | 82 | 96 | 98 | 82 | 98 |
| Imipenem | 77 | 62 | 90 | 85 | 92 | 98 | 81 | 98 |
| Ciprofloxacin | 68 | 54 | 78 | 74 | 83 | 73 | 81 | 90 |
| Levofloxacin | 63 | NT | 56# | 72# | 83 | 73 | NT | NT |

1 laboratory only

NT: Not tested

| |
|------------------|
| Incidence |
|------------------|

| (Number of laboratories) | Jhb (3) | Pta (3) | Dbn (2) | CT (2) | PE (1) | EL (1) | Bfn (1) | Whk (1) |
|-----------------------------|-----------|-----------|----------|----------|----------|----------|----------|---------|
| % ESBL production: | | | | | | | | |
| <i>Klebsiella</i> spp (n) | 39 (2260) | 21 (2041) | 9 (480) | 40 (728) | 23 (199) | 17 (116) | 21 (150) | 9 (86) |
| <i>Enterobacter</i> spp (n) | 10 (1237) | 13 (1042) | 6 (337) | 13 (479) | 20 (350) | 17 (45) | 10 (52) | 0 (17) |
| <i>E. coli</i> (n) | 5 (10878) | 3 (7124) | 3 (1966) | 3 (1237) | 1 (702) | 2 (423) | 8 (106) | 2 (495) |

| % Methicillin Resistance: | | | | | | | | |
|--------------------------------------|-----------|-----------|----------|-----------|----|----------|----------|---------|
| <i>S. aureus</i> (n) | 32 (5113) | 37 (3236) | 25 (872) | 20 (2443) | 5 | 11 (455) | 16 (634) | 3 (259) |
| Coagulase negative Staphylococci (n) | 65 (2374) | 70 (2580) | 41 (698) | 67 (558) | 70 | 47 (174) | 45 (506) | 38 (84) |

1 laboratory only

NT: Not tested