Date: May 22, 2019

To: Medical Staff  Office Managers  Nurse Managers
Laboratory Staff

Subject: 2018 Antimicrobial Susceptibility Trend Report

We are pleased to once again provide separate antibiograms for our outpatient and inpatient providers. If you require further assistance, please contact Microbiology or our Infectious Disease Department.

Susceptibility Trend Notes:

- Susceptibilities are reported as Percentages (%) of organisms tested.
- Maximum number (#) of strains tested is listed in ()
- ↑ Demonstrates a greater than (>) 5% increase in susceptibility from previous year
- ↓ Demonstrates a greater than (>) 5% decrease in susceptibility from previous year
- Trend assessment from the previous year is not provided for less than 100 isolates per species.
## 2018 Antibiogram Inpatient Providers (January-December)

### Relative Cost Per Day PO/IV

<table>
<thead>
<tr>
<th>Gram Negative Organisms</th>
<th>Amikacin</th>
<th>Ampicillin</th>
<th>Amp/sulbactam</th>
<th>Cefoxitin</th>
<th>Ceftriaxone</th>
<th>Ceftriaxone</th>
<th>Ciprofloxacin</th>
<th>Gentamicin</th>
<th>Meropenem</th>
<th>Levofloxacin</th>
<th>Pip/tazobactam</th>
<th>Tobramycin</th>
<th>Trimethoprim/sulfa</th>
<th>Nitrofurantoin only</th>
<th>Cost per Day PO/IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli (2145)</td>
<td>100</td>
<td>63</td>
<td>69</td>
<td>93(^3)</td>
<td>93</td>
<td>98</td>
<td>95</td>
<td>89</td>
<td>94</td>
<td>100</td>
<td>89</td>
<td>98</td>
<td>96</td>
<td>85</td>
<td>96</td>
</tr>
<tr>
<td>Enterobacter species (144)</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>88</td>
<td>88</td>
<td>100</td>
<td>99</td>
<td>100</td>
<td>100</td>
<td>89</td>
<td>99</td>
<td>97(\uparrow) 24(\downarrow)</td>
<td>-</td>
</tr>
<tr>
<td>Klebsiella species (442)</td>
<td>100</td>
<td>0</td>
<td>81</td>
<td>91(\uparrow)</td>
<td>97</td>
<td>95</td>
<td>91</td>
<td>93</td>
<td>97</td>
<td>100</td>
<td>93</td>
<td>94</td>
<td>94</td>
<td>90</td>
<td>43</td>
</tr>
<tr>
<td>Proteus species (177)</td>
<td>100</td>
<td>87</td>
<td>94</td>
<td>99(\uparrow)</td>
<td>98</td>
<td>99</td>
<td>88(\uparrow)</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>87(\uparrow)</td>
<td>98</td>
<td>98</td>
<td>87(\uparrow) 0</td>
<td>-</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa (182)</td>
<td>99</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>93</td>
<td>-</td>
<td>89(\uparrow)</td>
<td>97(\uparrow)</td>
<td>98</td>
<td>85(\uparrow)</td>
<td>99</td>
<td>99</td>
<td>-</td>
<td>-</td>
<td>94</td>
</tr>
</tbody>
</table>

### Relative Cost Per Day PO/IV

<table>
<thead>
<tr>
<th>Gram Positive Organisms</th>
<th>Ampicillin</th>
<th>Ceftriaxone</th>
<th>Non-meningitis</th>
<th>Ceftriaxone</th>
<th>Meningitis</th>
<th>Clindamycin</th>
<th>Erythromycin</th>
<th>Gentamicin</th>
<th>Levofoxacin</th>
<th>Linezolid</th>
<th>Oxacillin(^8)</th>
<th>Penicillin</th>
<th>Penicillin</th>
<th>Penicillin</th>
<th>Meningitis</th>
<th>Tetracycline</th>
<th>Trimethoprim/sulfa</th>
<th>Nitrofurantoin only</th>
<th>Cost per Day PO/IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staphylococcus aureus(^5) (723)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>75</td>
<td>44</td>
<td>99</td>
<td>76</td>
<td>100</td>
<td>62</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>95</td>
<td>96</td>
<td>100</td>
<td>98</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Staphylococcus coagulase negative (214)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>75</td>
<td>52</td>
<td>95</td>
<td>75(\uparrow)</td>
<td>100</td>
<td>61</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>89</td>
<td>75</td>
<td>100</td>
<td>99</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enterococcus faecalis(^6) (235)</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>74</td>
<td>100</td>
<td>-</td>
<td>99</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>97</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enterococcus faecium(^2,(^6) (28)</td>
<td>7/28</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7/28</td>
<td>28/28</td>
<td>-</td>
<td>5/28</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>14/28</td>
<td>4/25</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Streptococcus pneumoniae(^2) (35)</td>
<td>-</td>
<td>34/35</td>
<td>28/35</td>
<td>25/35</td>
<td>17/35</td>
<td>-</td>
<td>35/35</td>
<td>35/35</td>
<td>-</td>
<td>34/35</td>
<td>24/35</td>
<td>27/35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Streptococcus agalactiae (Group B) (^2) (35)</td>
<td>35/35</td>
<td>-</td>
<td>-</td>
<td>13/35</td>
<td>12/35</td>
<td>32/35</td>
<td>35/35</td>
<td>35/35</td>
<td>-</td>
<td>35/35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>35/35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1. Relative Total Cost per Day PO/IV for Treatment: Green = Least expense, Red = Most expense.
2. Trend assessment not provided due to low number of isolates. Reported as actual number of isolates susceptible.
3. Cannot differentiate Cefoxitin Susceptible from Intermediate categories by testing method on non urinary tract specimens. Results valid only when used as therapy for uncomplicated UTI for *Escherichia coli*, *Klebsiella pneumoniae* or *Proteus mirabilis*.
4. Gatifloxine tested by manual method on ESBL positive only (*Escherichia coli* and *Klebsiella pneumoniae*).
5. *Staphylococcus aureus* oxacillin data are based on the first isolate per patient within the calendar year.
6. For serious enterococal infections, combination therapy with a beta lactam and an aminoglycoside should be used. *E. faecium* data are based on first isolate per patient within calendar year.
7. Due to low number of isolates, reported as actual number of isolates susceptible and includes susceptible dose dependent (SDD).
8. Oxacillin is tested as a surrogate for methicillin and nafcillin.

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**Legend:**
- Gram Positive Organisms
- Pseudomonas aeruginosa
- Staphylococcus coagulase negative
- Staphylococcus aureus
- Staphylococcus pneumoniae
- Enterococcus faecalis
- Enterococcus faecium
- Streptococcus agalactiae (Group B)
- Relative Cost Per Day PO/IV

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**Notes:**
- *Escherichia coli* and *Klebsiella pneumoniae* are reported as % Susceptible.
- The 5% increase in susceptibility rate is >= 5% increase in susceptibility from Previous Year.
- The 5% decrease in susceptibility rate is <= 5% decrease in susceptibility from Previous Year.