



## Yampa Valley Medical Center- ALL LOCATIONS 2025 Antibiotic Susceptibility Report

### GRAM NEGATIVE

Organism	# of isolates	Ampicillin	Amox-Clav	Amp-Subl	Cefazolin	Cephems Oral -Urine	Ceftriaxone	Cefepime	Gentamicin	Levofloxacin	Nitrofurantoin	Pip/Tazo	Trimeth/Sulfa
<i>E. coli</i>	514	63%	87%	69%	80%	89%	93%	93%	93%	88%	98%(ur)	98%	82%
<i>K. pneumoniae</i>	71	--	94%	90%	93%	97%	99%	99%	96%	96%	61%(ur)	99%	93%
<i>P. aeruginosa</i>	22*	--	--	--	--	--	--	100%	--	95%	0%(ur)	95%	--
<i>P. mirabilis</i>	23*	87%	96%	94%	0%	90%	91%	91%	91%	74%	0%(ur)	100%	83%
<i>E. cloacae</i>	18*	--	--	--	--	--	100%	100%	100%	94%	15%(ur)	100%	75%

### GRAM POSTIVE

Organism	# of isolates	Ampicillin	Azithromycin	Clindamycin	Ceftriaxone	Doxycycline	Levofloxacin	Nitrofurantoin	Oxacillin	Trimeth/Sulfa	Vancomycin
<i>E. faecalis</i>	43	100%	--	--	--	65%	98%(ur)	100%(ur)	--	--	100%
<i>Staph aureus</i>	104	--	--	77%**	--	99%	--	100%(ur)	76%	96%	100%
MRSA		--	--	80%**	--	96%	--	100%(ur)	0%	92%	100%
MSSA		--	--	76%**	--	100%	--	100%(ur)	100%	97%	100%

\* <30 isolates / reduced statistical significance

\*\* Includes "Inducible Clindamycin" resistance

ur = For urine only

Organisms with <20 isolates not included

*S. pneumoniae*: High incidence of Macrolide resistance

For Staphylococci, oxacillin predicts methicillin, Beta-lactam combination agents, cepheems, and carbapenems.

Infection	Length of Therapy (Most Cases)
Community Acquired Pneumonia	5 days (clinically stable and afebrile x 2-3 days)
Hospital Acquired/Ventilator Associated Pneumonia	7 days with good initial clinical response
Skin-soft tissue infection (cellulitis)	5-7 days (erythema may not completely resolve by end of treatment, but should regress)
Uncomplicated cystitis	3-5 days (depends on antibiotic choice)
Complicated cystitis	5-7 days (depends on antibiotic choice, complicating feature, and clinical response)
Acute, uncomplicated pyelonephritis	5-7 days (including those with concomitant bacteremia)
Complicated intra-abdominal infections	4 days (adequate source control) ≥ 5-7 days (inadequate source control)
Bacteremia	Depends on source/pathogen/response – usually same duration as indicated for source <i>Staphylococcus aureus/tuberculosis</i> usually 4-6 weeks (ID Consult Strongly Encouraged)
**Guideline Based, Usual Durations for “Straight-Forward” Cases	

#### IV or PO therapy?

Antibiotics with similar efficacy:

- Fluoroquinolones
- Doxycycline
- Linezolid
- Metronidazole
- SMP/TMX
- Fluconazole
- Azithromycin
- Empiric cephalosporins for UTI

#### ESBL (Extended Spectrum Beta-lactamase)

- A group of  $\beta$ -lactamases which share the ability to hydrolyze extended spectrum cephalosporins and aztreonam.
- Most common in *E. coli*, *K. pneumoniae*, and *P. mirabilis*.
- Frequently plasmid encoded, thus an infection control concern.
- Carbapenems are the treatment of choice for serious infections due to ESBL-producing organisms.
- Not an inducible resistance but organisms may appear susceptible to some beta-lactamase inhibitor combinations, however treatment with such antibiotics has been associated with high failure rates.
- For uncomplicated cystitis: Known Hx of ESBL- favor TMP-SMX or Nitrofurantoin. For newly detected ESBL- if started empirically, a non-carbapenem beta-lactam is reasonable to finish course of therapy if testing susceptible.

#### AmpC

- Often inducible and confers resistance to penicillins, narrow- and expanded-spectrum cephalosporins (except cefepime) and is not inhibited by traditional B-lactamase inhibitors (clavulanate, sulbactam, tazobactam).
- As a result, isolates that initially tested susceptible to these agents subsequently exhibit non-susceptibility to these agents when inappropriate antimicrobial therapy is initiated.
- Cefepime is typically drug of choice.
- The risk of inducible AmpC expression is moderate to high in *E. cloacae* complex, *C. freundii*, and *K. aerogenes*

#### UCHealth Yampa Valley Medical Center- Antibiotic Stewardship Committee

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