

YKHC Annual Antibigram
January 1, 2019 - December 31, 2019

 YKHC		Total # of Isolates	Penicillins					Cephalosporins				Carbapenem	Fluoroquinolones		AMG	Miscellaneous					
			Penicillin	Oxacillin	Ampicillin	Amoxicillin/Clav £	Piperacillin/Tazo	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Meropenem	Ciprofloxacin	Levofloxacin	Gentamicin	Nitrofurantoin ⁺⁺	Tetracycline	Trimethoprim/Sulfa	Clindamycin [^]	Erythromycin	Vancomycin
Gram Negative	<i>Escherichia coli</i> ESBL	30				80	97					100	43	43	83	100	47	43			
	<i>E. coli</i>	945			46	89	99	90		96		100	85	85	91	98	76	70			
	<i>Enterobacter cloacae</i> *	57					96			89		100	100	100	100	39	98	93			
	<i>Klebsiella aerogenes</i> *	34					97			97		100	100	100	100	50	97	100			
	<i>Klebsiella pneumoniae</i>	45				98	98	96		96		100	98	98	100	63	89	98			
	<i>Proteus mirabilis</i>	38			89	100	100	95		95		100	97	97	95			95			
	<i>Pseudomonas aeruginosa</i> **	36					100				97	97	89	89	77						
Gram Positive	<i>Enterococcus faecalis</i>	32			97									100		100	31				100
	Coagulase Neg Staph sp.	159		50				50		50				94		97	91	87	74		99
	MRSA	147		R				R						53		100	99	99	91		100
	MSSA	286		100		100		100		100				99		100	99	100	93		100
	<i>Staph. aureus</i>	433		66				66		66				93		100	99	100	92		100
	<i>Streptococcus pneumoniae</i> ⁺	35	91		91				100	97				100			94	94	97	88	100

GENERAL NOTES:

- Percent susceptible for each organism/antimicrobial combination was generated by including the first isolate of that organism recovered from a given patient per year.
- Statistical validity of estimates of percent susceptible is lowered when <30 isolates obtained:
(*) 2018 & 2019 data combined to increase # of isoates for reporting
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- Enterobacteriaceae that are ESBL producers (resistant to 3rd gen. cephalosporins) are also resistant to most penicillins, cephalosporins, and aztreonam.
- Worldwide, there have never been penicillin resistant Beta-hemolytic Streptococcus, Group A (Strep. pyogenes) reported.
- Worldwide, there have never been vancomycin resistant *Streptococcus pneumoniae*, Viridans Streptococcus, or Beta-hemolytic Streptococci reported.
- Carbapenems & Pip/tazo have reliable coverage for *Bacteroides fragilis*; adding metronidazole is unnecessary.
- Organisms susceptible to tetracycline are also susceptible to doxycycline.
- Vancomycin MIC confirmation by e-test is routinely performed on bloodstream MRSA isolates.

MDRO NOTES SPECIFIC FOR THIS PERIOD:

- 30 (3.2% of *E.coli*) were ESBLs (Extended spectrum beta-lactamase producing).
(Susceptible: 43% FQs; 43% TMP/SMX; 100% Nitrofurantoin)
Macrobid is reliable for ESBL cystitis. CARBAPENEMS are preferred for most severe ESBL infections.
- 34% of *Staphylococcus aureus* were MRSA.

KEY/DEFINITIONS:

- (Gray Cell): Antibiotic is not tested, known to be clinically ineffective, and/or suppressed per CLSI limitations.
MRSA: Methicillin resistant *Staph aureus*
MSSA: Methicillin sensitive *Staph aureus*
AMG: Aminoglycoside
(+): *S. pneumoniae* susceptibility using meningitis PCN & Cephalosporin breakpoints
(++): Nitrofurantoin should be used only for cystitis in afebrile patients with CrCl > 30.
(^): Isolates with inducible clindamycin resistance (+ D test) are considered resistant.
(£): Amoxicillin/clavulanate susceptibility is not equivalent to ampicillin/sulbactam for gram-negative pathogens