YKHC Annual Antibiogram

January 1, 2020 - December 31, 2020

		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	*Escherichia coli* ESBL	24				92	92					100	38	38	92	100	50	50			
	E. coli	932			51	89	98	91		97		100	85	85	92	98	81	76			
	Enterobacter cloacae	32					84			69		97	97	97	97	32	97	94			
	*Klebsiella aerogenes***	46					98			98		100	100	100	100	50	96	100			
	Klebsiella pneumoniae	40				100	98	95		95		100	100	98	98	58	90	95			
	Proteus mirabilis	42			86	95	98	86		88		100	98	98	98			98			
	*Pseudomonas aeruginosa***	33					100				100	97	91	88	79						
Gram Positive	*Enterococcus faecalis**	56			98									100		100	38				100
	Coagulase Neg Staph sp.	153		42				42		42				92		100	90	79	66		95
	MRSA	116		R				R						52		100	99	100	96		100
	MSSA	262		100		100		100		100				95		100	98	100	95		100
	Staph. aureus	378		69				69		69				82		100	98	100	95		100
	*Streptococcus pneumoniae** +	44	88		88				100	95				100			95	95	98	89	100

GENERAL NOTES:

a. Percent susceptible for each organism/antimicrobial combination was generated by including the first isolate of that organism recovered from a given patient per year.
b. Statistical validity of estimates of percent suspectible is lowered when <30 isolates obtained:
(*) 2019 & 2020 data combined to increase # of isloates for reporting
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c. Enterobacteriaceae that are ESBL producers (resistant to 3rd gen. cephalosporins) are also resistant to most penicillins, cephalosporins, and aztreonam.
d. Worldwide, there have never been penicillin resistant Beta-hemolytic Streptococcus, Group A (Strep. pyogenes) reported.
e. Worldwide, there have never been vancomycin resistant *Streptococcus pneumoniae* , Viridans Streptococcus, or Beta-hemolytic Streptococci reported.
f. Carbapenems & Pip/tazo have reliable coverage for *Bacteroides fragilis* ; adding metronidazole is unnecessary.
g. Organisms susceptible to tetracycline are also susceptible to doxycycline.
h. Erythromycin is surrogate marker for Azithromycin for *Streptococcus pneumoniae.*

MDRO NOTES SPECIFIC FOR THIS PERIOD:

a. 24 (2.6% of *E.coli*) were ESBLs (Extended spectrum beta-lactamase producing).
(Susceptible: 38% FQs; 50% TMP/SMX; 100% Nitrofurantoin)
Macrobid is reliable for ESBL cystitis. CARBAPENEMS are preferred for most severe ESBL infections.
b. 31% 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, cefuroxime utilizing non-CSI
(++): 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