YKHC Annual Antibiogram

January 1, 2021 - December 31, 2021

		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	27				63	93					100	37	37	67	92	70	41			
	E. coli	1017			54	92	99	93		97		100	88	88	92	99	82	78			
	*Enterobacter cloacae**	53					91			77		98	98	98	98	34	94	94			
	*Klebsiella aerogenes***	43					100			95		100	100	100	100	42	93	100			
	Klebsiella pneumoniae	50				100	100	98		98		100	100	100	100	66	100	100			
	Proteus mirabilis	45			87	96	98	87		96		100	96	96	91			93			
	*Pseudomonas aeruginosa****	43					100				98	98	91	88	81						
Gram Positive	*Enterococcus faecalis**	50			100									100		98	50				100
	Coagulase Neg Staph sp.	148		55				55		55				95		100	94	84	83		100
	MRSA	83		R				R						46			98	99	95		98
	MSSA	264		100		100		100		100				95		100	99	100	96		100
	Staph. aureus	347		76				76		76				83		100	99	100	96		99
	*Streptococcus pneumoniae*** +	53	89		89				98	94				100			96	92	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:
(*) 2020 & 2021 data combined to increase # of isloates for reporting
(**) 2019, 2020 & 2021 data combined to increase # of isloates for reporting
(***) 2018, 2019, 2020 & 2021 data combined to increase # of isloates for reporting
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. 27 (2.7% of *E.coli*) were ESBLs (Extended spectrum beta-lactamase producing).
(Susceptible: 37% FQs; 41% TMP/SMX; 92% Nitrofurantoin)
Macrobid is reliable for ESBL cystitis. CARBAPENEMS are preferred for most severe ESBL infections.
b. 24% 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-CSF b
(++): 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