Technical Bulletin

Updated Fluoroquinolone Susceptibility Interpretations

TO: Medical Staff and Clients

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SUBJECT: **Updated interpretive standards reduce fluoroquinolone "susceptible" MICs**

The Clinical Laboratory Standards Institute (CLSI) updates guidelines for in vitro antimicrobial susceptibility testing annually. The 2019 breakpoints for fluoroquinolone susceptibility, which DLS implemented in February, 2019, were significantly lower than 2018. This means the minimum inhibitory concentrations (MICs) that were interpreted as susceptible in 2018 may be intermediate or resistant in 2019. Impacts of the new interpretations on our existing DLS antibiogram are illustrated below. Decreases in susceptibility of greater than 5% are indicated in RED. In general, fewer organisms are susceptible to fluoroquinolones.

Percentages in red indicate decrease in susceptibility by >5%	Citrobacter freundii	Citrobacter koserii	Enterobacter cloacae	Escherichia coli	E.coli (ESBL)	Klebsiella aerogenes	Klebsiella pneumoniae	K.pneumoniae (ESBL)	Klebsiella oxytoca	K.oxytoca (ESBL)	Proteus mirabilis	P.mirabilis (ESBL)	Pseudomonas aeruginosa	Serratia marcescens
Inpatients														
2018 Breakpoint														
Ciprofloxacin	93	90	99	84	26	96	100	41	95	100	98	50	92	97
Levofloxacin	96	100	99	86	26	100	100	48	95	100	98	66	89	100
2019 Breakpoint - using same MIC values as above														
Ciprofloxacin	96	85	91	81	16	92	95	19	90	100	96	33	87	92
Levofloxacin	96	89	95	83	11	100	99	19	90	100	98	66	80	100
Total Isolates	25	20	109	405	96	24	235	38	21	1	83	3	263	38
Outpatients														
2018 Breakpoint														
Ciprofloxacin	94	100	95	86	20	97	98	48	100	0	94	0	91	95
Levofloxacin	100	100	98	87	20	94	98	68	100	0	97	0	87	100
2019 Breakpoint - using same MIC values as above														
Ciprofloxacin	94	89	92	85	15	91	94	10	100	0	90	0	78	85
Levofloxacin	86	94	95	85	12	94	96	29	100	0	93	0	65	89
Total Isolates	17	36	99	1558	246	36	385	46	20	1	255	0	507	41

NOTE: Where total isolates is less than 30, the susceptibility percentage may not be clinically significant and are highlighted in yellow on these tables.
SOURCE: CLSI Document M39-A4, January 2014

The purpose of this bulletin is to provide updated interpretations and explain the impact on resistance trends. It is NOT intended to be specific therapeutic advice because all cases are different and must be evaluated within the context of clinical presentation and other relevant information.

- Please refer any questions to Terrie Koyamatsu, Manager - DLS Microbiology Laboratory at 589-5196, or DLS Client Services at 589-5101.

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