



**THE UNIVERSITY OF
CHICAGO MEDICINE &
BIOLOGICAL SCIENCES**

DATE: November 12th, 2019

TO: UCM Medical Staff, Housestaff, Nursing Staff,
Patient Care Centers, and Outpatient Clinics

FROM: **Xander van Wijk, PhD, DABCC**
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Assistant Director, Clinical Chemistry Laboratories

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Pharmacy Director, Antimicrobial Stewardship Program

RE: **Updated antibiotic reference (therapeutic) ranges, critical and alert values**

Effective November 14th, 2019, reference ranges, critical values, and pediatric alert values will be updated for amikacin, gentamicin, tobramycin, and vancomycin. Please find the updated values in the Table below. If you have any questions, please contact either one of us by email at xvanwijk@bsd.uchicago.edu, jyeo@bsd.uchicago.edu, or Natasha.Pettit@uchospitals.edu.

Test Name	Reference (Therapeutic) Range	Critical Value	Pediatric Alert Value
Amikacin, Peak	Extended interval dosing: 30-80 µg/mL Conventional dosing: 15-40 µg/mL	>80 µg/mL	>80 µg/mL
Amikacin, Random		>80 µg/mL	
Amikacin, Trough	<4 µg/mL	>10 µg/mL	>10 µg/mL
Gentamicin, Peak	Extended interval dosing: 6-20 µg/mL Conventional dosing: 3-10 µg/mL	>20 µg/mL	>20 µg/mL
Gentamicin, Random		>20 µg/mL	
Gentamicin, Trough	<2 µg/mL	>5 µg/mL	>3 µg/mL
Tobramycin, Peak	Extended interval dosing: 6-20 µg/mL Conventional dosing: 3-10 µg/mL	>20 µg/mL	>20 µg/mL
Tobramycin, Random		>20 µg/mL	
Tobramycin, Trough	<2 µg/mL	>5 µg/mL	>3 µg/mL
Vancomycin, Random	5-40 µg/mL	>40 µg/mL	>40 µg/mL
Vancomycin, Trough	10-20 µg/mL	>20 µg/mL	>20 µg/mL