

## Critical Value Reporting Policy

Effective March 2023

### Immediate Notification by Telephone:

Pursuant to federal regulation, Sonora Quest Laboratories must “immediately alert the individual or entity requesting the test and, if applicable, the individual responsible for using the test results when any test result indicates an imminently life-threatening condition or panic or alert values, (42CFR493.1291(g))”. A policy implementing this regulation is required by the College of American Pathologists (CAP).

Certain test results have been identified as potentially life threatening when their values fall outside established reference ranges. These results will be flagged as *critical values* and handled differently than abnormal or STAT test results.

Sonora Quest Laboratories is responsible for effectively communicating critical value test results to the appropriate clinical individual immediately when such results are generated, 24 hours a day and 7 days a week. The laboratory is required to document the appropriate clinical individual receiving notice of critical value test results. When results are communicated verbally, laboratory personnel are also required to ask for a verification “read back” of the critical value test results to ensure clear communication.

The attached critical values represent the analytes and their respective values identified as potentially life threatening and will be reported immediately by telephone when such results are generated. No other abnormal test results will be reported immediately unless requested by the ordering physician on the test requisition.

### Alternate Process for Reporting Critical Values:

Certain clients treat patients whose test results routinely have panic or alert values and choose to only receive notification by telephone during certain hours. CAP has determined that communication of critical value results by facsimile or electronic transmission is acceptable as long as verbal confirmation of the receipt of said results is made at the end of the exception period. Clients may request exceptions to Sonora Quest Laboratories Critical Value Reporting Policy if:

- The requests are reasonable and within regulatory guidelines.
- The client completes a Critical Call Exception Form.
- The client acknowledges that occasionally, due to uncontrollable circumstances (system down, etc.); Sonora Quest Laboratories may be unaware of exceptions to the Critical Value Reporting Policy and will default to the standard procedure.

<b>Toxicology</b>	<b>Critical Values</b>	<b>Normal Ranges<sup>^</sup></b>	<b>Units</b>
Acetaminophen	>49	10-20	µg/mL
Alcohol, Ethyl, Blood	>299	<10	mg/dL
Amikacin, Peak	>35.0	25-35	µg/mL
Amikacin, Trough	>10.0	1-8	µg/mL
Carbamazepine	>15.0	4.0-12.0	µg/mL
Cyclosporine A (Parent)	>400	100-300	ng/mL
Digoxin	>2.4	0.8-2.0	ng/mL
Digoxin, Free	>2.2	0.7-1.8	ng/mL
Dilantin (Phenytoin)	>30.0	10.0-20.0	µg/mL
Ethylene Glycol	>10	<10	mg/dL
Gentamycin, Peak	>12.0	5.0-10.0	µg/mL
Gentamycin, Trough	>2.0	1.0-2.0	µg/mL
Lead, Blood, Adult (≥16 years)	>39.9	<5.0	mcg/dL
Lead, Blood, Pediatric (<16 years)	>19.9	<3.5	mcg/dL
*Lithium	>1.5	0.5-1.2	mmol/L
Pentobarbital	>10.0	1.0-5.0	µg/mL
Phenobarbital	>59.9	15.0-40.0	µg/mL
Phenytoin (Dilantin)	>30.0	10.0-20.0	µg/mL
Phenytoin, Free (Dilantin, Free)	>3.0	1.0-2.0	µg/mL
Salicylates	>39.9	15.0-30.0	mg/dL
Tacrolimus (FK506)	>20.0	5.0 -20.0	ng/mL
Theophylline (<3 months)	>15.0	5.0-12.0	µg/mL
Theophylline	>20.0	8.0-20.0	µg/mL
Tobramycin, Peak	>12.0	5.0-10.0	µg/mL
Tobramycin, Trough	>2.0	1.0-2.0	µg/mL
Valproic Acid	>150	Epilepsy: 50-100 Acute Mania: 50-125	µg/mL
Vancomycin, Peak	>60.0	20.0-40.0	µg/mL
Vancomycin, Trough	>30.0	10.0-20.0	µg/mL

**\*Indicates changes or additions from prior printing | ^Adult normal ranges listed unless otherwise noted**



Hematology	Critical Low	Critical High	Normal Ranges <sup>^</sup>	Units
Hematocrit	≤18.0		Male: 40.0-53.0 Female: 35.0-48.0	%
Hemoglobin	<6.1		Male: 13.0-18.0 Female: 11.5-16.0	g/dL
Platelet Count	<31	>1000	130-450	K/mm <sup>3</sup>
WBC (Hematology)	<1.0	>50.0	4.0-11.0	K/mm <sup>3</sup>
WBC (Flow Cytometry)	<1,000	>50,000	4,000-11,000	Cells/uL
Neutrophils, Absolute	<0.5		1.6-9.3	k/uL

Coagulation	Critical Low	Critical High	Normal Ranges <sup>^</sup>	Units
aPTT (does not pertain to aPTT when performed as part of aPTT Mix or Lupus Anticoagulant testing)		>100.0	24.0-36.5	Seconds
Fibrinogen	<51		200-400	mg/dL
Heparin Assay (unfract.) by Anti-Xa		>1.2	0.3-0.7	U/mL
LMW Heparin by Anti-Xa		>1.5	0.6-1.0	U/mL
Protime INR		>5.0	0.9-1.1	

Chemistry	Critical Low	Critical High	Normal Ranges <sup>^</sup>	Units
*Ammonia (≤1 month)		>150	Male: ≤ 60 Female: ≤ 51	μmol/L
Bilirubin, Neonatal (Total) (<1 month)		>18.0	0-14 Days ≤14.6 15-30 Days ≤0.6	mg/dL mg/dL
Calcium, Serum	<6.6	>12.9	8.7-10.4	mg/dL
Calcium, Ionized	<3.30	>6.00	4.52-5.28	mg/dL
Carbon Dioxide (CO <sub>2</sub> )	<11	>40	20-31	mmol/L
Carboxyhemoglobin, Blood		>20.0	<1.6 (Smoker: 4.0-9.0)	%
Glucose, Serum (<1 month)	<40	>300	50-80	mg/dL
Glucose, Serum	<50	>500	70-99	mg/dL
Glucose, CSF	<30		40-70	mg/dL
Magnesium, Serum	<1.0	>4.9	1.5-2.5	mg/dL
Methemoglobin		>30.0	<1.6	%
*Phosphorus, Serum	<1.1		2.4-4.8	mg/dL
*Potassium, Serum (<1 year)	<2.8	>6.1	3.5-6.1	mmol/L
Potassium, Serum	<2.8	>6.0	3.6-5.3	mmol/L
Sodium, Serum	<121	>159	135-145	mmol/L
Troponin T, High Sensitive		≥ 100	Female: ≤ 11 Male: ≤ 19	ng/mL ng/mL

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*Microbiology	Critical Result
AFB Smear	Positive
AFB identified as <i>Mycobacterium tuberculosis</i>	Positive
Blood Culture Initial Gram Stain	Positive
Spinal Fluid Direct or Culture	Positive
Culture (ANY SOURCE)	Positive – Gram positive rods, typical of <i>Clostridium species</i>
Culture (ANY STERILE SOURCE)	Positive - <i>Neisseria meningitidis</i>
Direct Gram Stain or Culture (ANY SOURCE) suspect for bioterrorism agent	<b><u>Any organism listed on the Bioterrorism list.</u></b>
Culture Results on: Deep seated wounds, bloods, CSF, other normally sterile sites and urine with significant colony counts.	Positive Culture for Group A, <i>Streptococcus pyogenes</i>
Gram Stain Direct specimen or Culture Isolate on: Wounds, bloods, spinal fluid, and other normally sterile sites	Gram negative diplococci (GNDC)
Culture Susceptibility Result	VISA (Vancomycin intermediate <i>Staph.aureus</i> ), or VRSA (Vancomycin resistant <i>Staph.aureus</i> ), or <i>M.tuberculosis</i> if any resistance is encountered from susceptibility or molecular testing.
Virology	Critical Result
Spinal Fluid Direct or Culture	Positive
Neonates (less than 6 weeks of age) – Virus Culture - Any Source	Positive for: Enterovirus Cytomegalovirus (CMV) Herpes simplex Virus (HSV) Varicella Zoster Virus (VZV)