

Appendix A: Critical Values

CHEMISTRY		HEMATOLOGY	
Analyte	Critical Values	Analyte	Critical Values
Bilirubin, total	>10 mg/dL <i>Neonates <48 hr</i> >20 mg/dL <i>48hr – 18 y.o.</i> >30 mg/dL <i>Adults</i>	WBC	<2 > 40 K/uL <i>Adults</i> <5 > 35 K/uL <i>Pediatric < 7 days</i> <2 > 25 K/uL <i>Pediatric >= 7 days</i>
Bilirubin, direct	> 2.0 mg/dL <= 16 y.o.	Hemoglobin	<7 > 19 g/dl > 1 month old <7 > 22 g/dl < 30 days old
BUN	> 100 mg/dL	Hematocrit	< 21% > 58% <i>Adults (>= 18y.o.)</i> <25% >65% <i>Pediatric < 2 months</i> <25% >55% <i>Pediatric >= 2 months</i>
Calcium	< 7 > 14 mg/dL	Platelets	<50 >999 K/uL <i>Adults (>= 10 y.o.)</i> <75 >750 K/uL <i>Pediatric < 10 y.o.</i>
Chloride	< 70 > 120 mmol/L	CSF	>1000 WBC/mm ³ <i>Adults (>= 10 y.o.)</i> >10 WBC/mm ³ <i>Pediatric < 10 y.o.</i>
CO2	< 10 > 40 mmol/L	New dx of acute leukemia Pathologist to call	
Creatinine	> 5 mg/dL <i>Adults</i> > 1.2 mg/dL < 3 y.o.	New dx of intracellular parasite Pathologist to call	
Glucose	< 40 > 500 mg/dL <i>Adults</i> < 40 > 200 mg/dL <i>7 days – 18 y.o.</i> < 30 >200 mg/dL <i>Pedi <= 7 days</i>	COAGULATION	
Lactic Acid	>4.0 mmol/L	Analyte	Critical Values
Magnesium	< 0.8 > 5.0 mg/dL	INR	>= 6.0, “No Clot Detectd”
Phosphorus	< 1.0 > 9.0 mg/dL	PTT	>= 80 sec, “No Clot Detectcd”
Potassium	< 3.0 > 6.0 mmol/L	Fibrinogen	< 100 >800 mg/dL
Sodium	< 120 > 160 mmol/L > 1 y.o. < 125 > 155 mmol/L <=1 y.o.	D-Dimer	>= 0.50 mg/L FEU
Troponins	> 0.60 ng/mL	LMW (Anti-Xa)	>1.50 IntlUnits/mL
pH	< 7.2 > 7.6 (<i>arterial / mixed venous</i>) <7.1 >7.6 (<i>cord arterial / venous</i>) < 7.2 > 7.55 (<i>venous/capillary</i>)	URINALYSIS	
pCO2	< 20 > 65 mmHg (<i>arterial</i>) < 20 > 60 mmHg (<i>venous/capillary</i>) <19.1 >60 mmHg (<i>mixed venous</i>)	UA	Positive Ketones, sugars <i>Newborn <=7days</i>
pO2(arterial)	< 55 mmHg	THERAPEUTIC DRUGS	
High Sens. CRP	>1.0 mg/dL <i>all children ≤ 6 weeks old</i>	Analyte	Critical Values
MICROBIOLOGY		Acetaminophen	> 50 ug/mL
Critical Values		Carbamazepine	> 12 ug/mL
Positive AFB smear or culture		Gentamicin	> 3.0 ug/mL (trough) >10.0 ug/mL (peak)
Positive Blood culture		Lithium	> 1.5 mmol/L
Positive Bordetella smear or culture		Digoxin	> 3.0 ng/mL
Positive Cryptococcal antigen		Salicylate	> 40 mg/dL
Positive CSF smear or culture		Theophylline	> 20 ug/mL
Positive Haemophilus influenzae, blood or CSF		Valproic acid	> 150 ug/mL
Positive Neisseria meningitidis, blood or CSF		Vancomycin	> 20 ug/mL (trough)
Positive urine cultures, patients < 3 years of age		TRANSFUSION SERVICES	
Positive smear or culture of any sterile body fluid		Critical Values	
Positive Meningitis Panel		Hemolytic Transfusion Reaction	