

MultiCare Yakima Memorial Laboratory Critical Values

POLICY: The laboratory will call all results that are “Critical values” after verification. Critical value reporting is a **Red Rule**.

Hematology (In-patient)

Test	Age	Critical Low	Critical High	Alerting Category
WBC		<0.2 10 ⁹ /L	>50.0 10 ⁹ /L	Always
Hemoglobin [Hgb]		<5.0 g/dL		Always
Hematocrit [Hct]		<15.0 %		Always
Platelet Count	<1 month	<20 10 ⁹ /L	>998 10 ⁹ /L	Always
	>1 month	<10 10 ⁹ /L	>998 10 ⁹ /L	Always
CSF WBC Count			>10 cells/uL	Always
Manual Differentials				
Intracellular bacteria			Present*	Always
Blood parasites, fungal organisms			Present*	Always
Unexpected blasts			Present*	Always

*Requires pathologist review.

Hematology (Out-patient)

Test	Age	Critical Low	Critical High	Alerting Category
WBC		<2.0 10 ⁹ /L	>50.0 10 ⁹ /L	Always
Hemoglobin [Hgb]		<6.0 g/dL		Always
Hematocrit [Hct]		<18.0 %		Always
Platelet Count		<20 10 ⁹ /L	>998 10 ⁹ /L	Always

Coagulation

Test	Age	Critical Low	Critical High	Alerting Category
INR			>4.49	Always
APTT			>170 sec	Always
D-Dimer			>500 ug/mL	Always
UFH			>0.8 IU/mL	Always
LMWH			>2.00 IU/mL	Always

Urinalysis

Test	Age	Critical Low	Critical High	Alerting Category
Urine Glucose	Newborn		3+	Always

Blood Bank

Test	Age	Critical Low	Critical High	Alerting Category
DAT	Newborn		Positive*	Always
DAT [Transfusion Reaction Investigation]			Positive**	Always
Kleihauer Betke			Positive***	Always
RPR			Reactive	Always

* 1⁺ or greater reaction.

** Negative pre-transfusion, positive post-transfusion.

*** Positive that requires an increase in immune D dose.

Chemistry

Test	Age	Critical Low	Critical High	Alerting Category
Acetaminophen			>30.0 ug/mL	Always
Alcohol			>0.30 %	Always
BUN			>89 mg/dL	First Instance
Calcium		<6.6 mg/dL	>13.9 mg/dL	Always
CO ₂		<10 mmol/L	>40 mmol/L	Always
Digoxin			>2.5 ng/mL	Always
Dilantin [Phenytoin]			>20 ug/mL	Always
Direct Bilirubin			>10.0 mg/dL	Always
Gentamicin [Trough]			>2.0 ug/mL	Always
Gentamicin [Peak/Random]			>10.0 ug/mL	Always
Glucose	Neonatal	<30 mg/dL	>299 mg/dL	Always
	All	<51 mg/dL	>499 mg/dL	Always
Lithium			>2.5 mmol/L	Always
Magnesium		<1.0 mg/dL	>4.0 mg/dL	Always
Magnesium [OB patient]			>6.5 mg/dL	Always
Phenobarbital			45.0 ug/mL	Always
Potassium		<2.6 mmol/L	>6.4 mmol/L	Always
Phosphorus		<1.0 mg/dL		Always
Salicylate			>30 mg/dL	Always
Sodium	Neonatal	<121 mmol/L	>169 mmol/L	Always
	All	<116 mmol/L	>169 mmol/L	Always
Tegretol [Carbamazepine]			>12.0 ug/mL	Always
Theophylline			>20.0 ug/mL	Always
Tobramycin [Trough]			>2.0 ug/mL	Always
Tobramycin [Peak/Random]			>12.0 ug/mL	Always
Total Bilirubin	Neonatal		>15.0 mg/dL	Always
Valproic Acid			>150.0 ug/mL	Always
Vancomycin [Trough]			>25.0 ug/mL	Always
Vancomycin [Peak/Random]			>50.0 ug/mL	Always
Troponin			>0.06 ng/mL	First Instance*

*and values >0.49 **AND** increasing.

Blood Gases

Test	Age	Critical Low	Critical High	Alerting Category
Lactic Acid [arterial/venous]			>3.4 mmol/L	Always
pCO ₂ arterial		<19 mm Hg	>67 mm Hg	Always
pO ₂ [arterial/venous/capillary]	Neonatal	<43 mm Hg	>250 mm Hg	Always
pO ₂ [arterial/venous]	ALL	<43 mm Hg		Always
pH [arterial/venous]		<7.20	>7.60	Always
Carboxyhemoglobin			>20 %	Always

Microbiology

Test	Age	Value	Alerting Category
CSF Culture		Positive	Always
Group B Genital Strep Screen		Positive	Always
Blood Smears		Positive for parasites	Always
SARS-CoV-2 [COVID-19]		Detected	Always

LAST REVISED: May 2023