

**OHIOHEALTH LABORATORY SERVICES  
INPATIENT, ED AND OTHER HOSPITAL BASED PATIENT  
CRITICAL VALUE NOTIFICATION LIST**

Effective 12/10/2024

Applies To Berger Hospital, Delaware Health Center, Doctor's Hospital, Dublin Methodist Hospital, Grady Memorial Hospital, Grant Medical Center, Grove City Methodist Hospital, Hardin Memorial Hospital, Mansfield Hospital, Marion General Hospital, O'Bleness Hospital, Pickerington Methodist Hospital, Riverside Methodist Hospital, Shelby Hospital, Westerville Medical Campus

Test	Critical Low	Critical High	Alerting Category	Notification Rule
<b>CHEMISTRY</b>				
Bicarb (Carbon Dioxide)	<10 mmol/L	> 40 mmol/L	Always	Within 1 Hr
Bilirubin, Total Neonatal < 30 days		> 18.0 mg/dL	Always	Within 1 Hr
BUN (Urea Nitrogen)		>100 mg/dL	First instance	Within 1 Hr
Calcium, Ionized	< 3.0 mg/dL	> 6.5 mg/dL	Always	Within 1 Hr
Calcium, Total	< 6.0 mg/dL	> 13.5 mg/dL	Always	Within 1 Hr
Carbon monoxide		>10%	First instance	Within 1 Hr
Creatinine		>9.0 mg/dL	First instance	Within 1 Hr
Glucose 0 – 2 days 3 days - 1 year ≥2 years	< 25 mg/dL <40 mg/dL ≤ 55 mg/dL	> 145 mg/dL > 400 mg/dL > 400 mg/dL	Always	Within 1 Hr
Lactic Acid		> 4 mmol/L	Always	Within 1 Hr
Lipase* *RMH, MGH, MH, SH, MGH and OMH Emergency Dept only; Operational Alert		> 200 U/L (Roche analyzers)	First instance	Within 1 Hr
Magnesium Maternity Non-maternity	< 1.0 mg/dL	> 7.0 mg/dL > 4.0 mg/dL	Always	Within 1 Hr
pH, Blood Arterial and Venous Cord Blood	< 7.2 < 7.0	> 7.6	Always	Within 1 Hr
Phosphorus	< 1.0 mg/dL		Always	Within 1 Hr
pO <sub>2</sub> Arterial	< 45 mmHg		Always	Within 1 Hr
Potassium 0 – 31 days > 31 days	< 2.8 mmol/L < 2.8 mmol/L	> 6.5 mmol/L > 6.0 mmol/L	Always	Within 1 Hr

Test	Critical Low	Critical High	Alerting Category	Notification Rule
Sodium	< 120 mmol/L	> 160 mmol/L	Always	Within 1 Hr
Troponin T		> 14 ng/L Females > 22 ng/L Males	First instance	Within 1 Hr
Troponin T Delta		Delta >7.0 ng/L if the initial troponin is ≤ 35 ng/L Delta ≥20% if the initial troponin >35 ng/L	First instance	Within 1 Hr
<b>TOXICOLOGY</b>				
Acetaminophen,		> 50 mcg/mL	Always	Within 1 Hr
Amikacin Peak/Post-Dose,		> 30 mcg/mL	Always	Within 1 Hr
Amikacin, Trough/Pre-Dose		> 8 mcg/mL	Always	Within 1 Hr
Carbamazepine, Total		> 12.0 mcg/mL	Always	Within 1 Hr
Digoxin		> 2.5 ng/mL	Always	Within 1 Hr
Ethyl Alcohol		> 400mg/dL	First instance	Within 1 Hr
Gentamicin Peak/Post-Dose		> 12.0 mcg/mL	Always	Within 1 Hr
Gentamicin Trough/PreDose		> 2.0 mcg/mL	Always	Within 1 Hr
Lithium		> 1.5 mmol/L	First instance	Within 1 Hr
Methotrexate		Call all	Always	Call all
Phenobarbital		> 40 mcg/mL	Always	Within 1 Hr
Phenytoin, Free		> 2.0 mcg/mL	Always	Within 1 Hr
Phenytoin, Total Neonate (<30 days) Children and adults		> 15 mcg/mL > 25 mcg/mL	Always	Within 1 Hr
Salicylate		> 30 mg/dL	First instance	Within 1 Hr
Theophylline 0-4 Months > 4 Months		> 16 mcg/mL > 20 mcg/mL	Always	Within 1 Hr
Tobramycin, Peak/Post-Dose		> 12.0 mcg/mL	Always	Within 1 Hr

Test	Critical Low	Critical High	Alerting Category	Notification Rule
Tobramycin, Trough/PreDose		> 2.0 mcg/mL	Always	Within 1 Hr
Valproic Acid		> 130 mcg/mL	Always	Within 1 Hr
Vancomycin Peak/Post-Dose		> 40.0 mcg/mL	Always	Within 1 Hr
Vancomycin Trough/Pre-Dose		> 20.0 mcg/mL	Always	Within 1 Hr
<b>HEMATOLOGY</b>				
Activated Partial Thromboplastin Time (APTT)		> 130 seconds	Always	Within 1 Hr
Cerebrospinal Fluid (CSF) Cell Count		> 10 Cells/mcL Mononuclear WBC/Nuc	Always	Within 1 Hr
D-Dimer* *RMH ED only, Operational alert		≥0.5 mcg/mL FEU		
Factor Assays	< 5%		Always	Within 1 Hr
Fetal Fibronectin (fFN)		Call all	Always	Call all
Fetal Hemoglobin (Kleihauer-Betke)		Positive test for fetal-maternal hemorrhage with an estimated bleed volume ≥ 50 mL (notify neonatologist and obstetrician).	Always	Within 1 Hr
Fibrinogen	< 100 mg/dL		Always	Within 1 Hr
Hemoglobin (HgB) Neonates (<30 days) Delta change from Previous result	< 8.0 g/dL Neonate <30 days	> 25.0 g/dL > 5.0 g/dL drop	Always	Within 1 Hr

Test	Critical Low	Critical High	Alerting Category	Notification Rule
Hemoglobin (HgB) ED/IP and Hospital Based Outpatients Delta change from Previous result	< 7.0 g/dL	> 20.0 g/dL  > 5.0 g/dL drop	Always	Within 1 Hr
Manual Differential Requiring Pathology Review		Blasts greater than 5%  Any number of blasts with Auer rods	First instance	Within 1 Hr
Microorganisms		All positives, including blood parasites, from blood or sterile sites (e.g. CSF, pleural fluid, peritoneal fluid, joint fluid)	First instance	Within 1 Hr
Platelet Count Neonate (<30 day)	< 50 K/mcL	> 1,000 K/mcL	First instance	Within 1 Hr
Platelet Count	< 50 K/mcL  < 15 K/mcL*  *Blood and Marrow Transplant Patients Only (excluding Mansfield and Shelby Labs)	> 1,000 K/mcL	First instance	Within 1 Hr
Protime (PT) INR		> 5.0	Always	Within 1 Hr
WBC (White Blood Cell Count) Neonate (<30 days)	< 2.0 K/mcL	> 50.0 K/mcL	First instance	Within 1 Hr

Test	Critical Low	Critical High	Alerting Category	Notification Rule
WBC (White Blood Cell Count)	< 1.2 K/mcL  < 0.5 K/mcL*  *Blood and Marrow Transplant Patients Only (excluding Mansfield and Shelby Labs)	> 35.0 K/mcL	First instance	Within 1 Hr
<b>SEROLOGY AND SPECIAL TESTING</b>				
Hepatitis A Antibody, IgM		All positives	First instance	Within 8 hrs
HIV-1/2 Exposure Screen  On Source: Positive HIV-1/2 HBsAG, and HCV		ALL associate exposures called by laboratory technologist	<b>Always</b>	Within 1 Hr
Rapid HIV, Hep B Ag, and HCV on Source				

Test	Critical Result	Alerting Category	Notification Rule (From detection)
<b>MICROBIOLOGY</b>			
Antigen test for: <ul style="list-style-type: none"> <li>Pneumocystis</li> <li>Cryptococcus</li> </ul>	Positive	Always	Within 1 hour
Blood Culture	For 1 <sup>st</sup> time positives: Perform and report BCID and Gram stain result at the same time	Always	Within 1 hour
Blood Culture	Identification of an ESBL, MDRAB, VRSA and VISA <b>only</b>	First Instance	Within 1 hour
Molecular test or Culture of Internal Sterile Sites or Eyes, where Gram stain was NOS	Positive for bacterial, fungal, mycobacterial or viral agents	Always	Within 1 hour
Acid Fast Bacillus	Positive stain Positive culture Positive molecular test	First instance	Within 1 hour
MEID Panel results	All positives	Always	Within 1 hour
Gram Stains ordered STAT from OR	All results (positive and negative) for all patients	Always	Within 1 hour
Gram stains from sterile body fluids	All positives	Always	Within 1 hour
Sexually transmitted infections <ul style="list-style-type: none"> <li>Neisseria gonorrhoeae</li> <li>Chlamydia trachomatis</li> </ul>	<b>Labor and Delivery</b>	Always	Within 1 hour
Recovery of these isolates <b>ANY</b> source	Identification of CRE, MDRAB, VRSA and VISA Cryptococcus species Dimorphic fungi Francisella species Clostridium perfringens Bordetella pertussis Vibrio cholerae E. coli O157 Viruses from newborns up to 60 days old from any location	First time recovery	Within 1 hour

Test	Critical Result	Alerting Category	Notification Rule (From detection)
	<b>Inpatients only:</b> Norovirus, Astrovirus, Sapovirus		

**Anatomic Pathology and Cytopathology Critical Notification Results**

Diagnoses or findings that, in the pathologist's opinion, indicate a life-threatening condition requiring immediate therapeutic intervention (e.g., vasculitis, tissue invasive infectious agents, organ transplant rejection).

**Anatomic Pathology and Cytopathology Significant And Unexpected Findings**

1. Malignancy in an uncommon location or specimen type
2. Major change of a frozen section diagnosis after review of permanent sections
3. Amendments to reports that may significantly affect patient care

The pathologist should communicate Significant and Unexpected Findings to the responsible clinician within 3 days of diagnosis.

<b>Transfusion Services*</b>
<b>Critical Values</b>
<i>*The transfusion medical director is notified in addition to the responsible provider or designated agent</i>
A positive Direct Antiglobulin Test (DAT) on a post-transfusion reaction specimen when the DAT on the pre-transfusion reaction specimen is negative or not as strong as the DAT on the post-transfusion reaction specimen.
A positive crossmatch with the post-transfusion reaction sample.
Hemolysis in the initial and redrawn post-transfusion reaction specimens.
A positive antibody screen in a patient who received emergency-issued uncrossmatched RBCs prior to the detection of an antibody(s).
Incompatible crossmatch on a unit released as "Uncrossmatched" in an emergent situation, with the exception of LTOWB in BBS.
Positive gram stain of the residual component involved in a transfusion reaction
RBCs issued or transfused, and evidence of a possible mistyping discovered (e.g. ABO/Rh discrepancy on new sample, evidence of wrong-blood-in-tube).
Market withdrawal of a blood component because the co-component caused a potentially life-threatening reactions (e.g. septic, TRALI) in another patient, or was found to have a positive bacterial culture.
An Adverse Reaction to Transfusion evaluation suggestive of an acute hemolytic transfusion reaction, bacterial contamination, TRALI or other serious adverse event.
<b>Operational Alert</b>
<i>*the patient's nurse or provider is notified*</i>
Positive antibody screen in a Labor and Delivery Patient that requires TND to be performed (i.e., for all clinically significant antibodies).