OHIOHEALTH Laboratory Services

INPATIENT, ED AND OTHER HOSPITAL BASED PATIENT

CRITICAL VALUE NOTIFICATION LIST

09/02/2021

| **Test** | **Critical Low** | **Critical High** | **Alerting Category** | **Notification Rule** |
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| CHEMISTRY |  |  |  |  |
| Amylase Total Emergency Dept only |  | > 400 U/L | First instance | Within 1 Hr |
| Amylase, PancreaticEmergency Dept only |  | >300 U/L | First instance | Within 1 Hr |
| 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 hour |
| 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> 2 days | < 25 mg/dL< 40 mg/dL | > 145 mg/dL> 400 mg/dL | Always | Within 1 Hr  |
| Lactic Acid |  | > 4 mmol/L | Always | Within 1 Hr |
| Lipase\* Lipase\* at MGH, MH, SH, MGH and OMH \*Emergency Dept only |  | > 200 U/L>500 U/L | First instanceFirst 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 | < 7.2 | > 7.6 | Always | Within 1 Hr |
|  Cord Blood | < 7.0 |  |  |  |
| Phosphorus | < 1.0 mg/dL |  | Always | Within 1 Hr |
| pO2 Arterial  | < 45 mmHg |  | Always | Within 1 Hr |
| Potassium0 – 31 days> 31 days | < 2.8 mmol/L< 2.8 mmol/L | > 6.5 mmol/L> 6.0 mmol/L | Always | Within 1 Hr |
| 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/LDelta ≥20% if the initial troponin >35 ng/L | First instance | Within 1 Hr |
| Troponin I |  | >59 ng/L | First instance | Within 1 Hr |
| Troponin I Delta |  | Delta ≥12 ng/L if the initial troponin ≤59 ng/LDelta ≥20% if the initial troponin > 59 ng/L | First instance | Within 1 Hr |
| **TOXICOLOGY** |  |  |  |  |
| 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 |
| Desipramine |  | > 300 mcg/mL | Always | Within 1 Hr  |
| Desipramine and Imipramine |  | > 300 mcg/mL | Always | Within 1 Hr  |
| Digoxin |  | > 2.5 ng/mL | Always | Within 1 Hr |
| Disopyramide |  | > 7.0 mcg/mL | Always | Within 1 Hr  |
| Ethyl Alcohol |  | > 400mg/dL (> 0.4 g/dL) | First instance | Within 1 Hr |
| Ethylene Glycol  |  | > 0.1 g/L | First instance | Within 1 Hr  |
| Gentamicin Peak/Post-Dose |  | > 12.0 mcg/mL | Always | Within 1 Hr |
| Gentamicin Trough/Pre-Dose |  | > 2.0 mcg/mL | Always | Within 1 Hr |
| Lidocaine |  | > 6.0 mcg/mL | Always | Within 1 Hr  |
| Lithium |  | > 1.5 mmol/L | First instance | Within 1 Hr |
| Methotrexate  |  | Call all | Always | Call all  |
| Nortriptyline |  | > 300 mcg/mL | Always | Within 1 Hr  |
| Nortriptyline & Amitriptyline |  | > 300 mcg/mL | Always | Within 1 Hr  |
| 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 |
| Primidone |  | > 15.0 mcg/mL | Always | Within 1 Hr  |
| Procainamide |  | > 10.0mcg/mL | Always | Within 1 Hr  |
| Procainamide /NAPA |  | > 40.0 mcg/mL | Always | Within 1 Hr  |
| Quinidine |  | > 7.0 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 |
| Tobramycin, Trough/Pre-Dose |  | > 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 |
| Volatile Screen, Blood  Acetone Ethyl Alcohol Isopropanol Methanol |  | > 0.1 g/dL> 0.4 g/dL> 0.1 g/dL> 0.1 g/dL | First instance | Within 1 Hr  |

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| **HEMATOLOGY** |  |  |  |  |
| 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 |
| 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/dLNeonate <30 days | > 25.0 g/dL> 5.0 g/dL drop | Always | Within 1 Hr |
| Hemoglobin (HgB)ED/IP and Hospital Based OutpatientsDelta change from Previous result | < 7.0 g/dL | > 20.0 g/dL> 5.0 g/dL drop | Always | Within 1 Hr |
| Lamellar Bodies |  | Call all | Always | Within 1 Hr |
| Manual Differential Requiring Pathology Review |  | Clinically significant abnormalitiesRequiring timely intervention **Blasts or malignant cells** | First instance | Within 8 Hrs |
| **Test** | **Critical Result** | Alerting Category | **Notification Rule** | **Test** |
| Microorganisms |  | All positives including any blood parasite | 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 | > 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 |
| WBC (White Blood Cell Count)  | < 1.2 K/mcL | > 35.0 K/mcL | First instance | Within 1 Hr |
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| **SEROLOGY AND SPECIAL TESTING** |  |  |  |  |
| Lead  |  | >20 mcg/dL≥10 mcg/dL | First instanceFirst instance | Within 1 HrWithin 8 Hrs |
| Hepatitis A Antibody, IgM |  | All positives | First instance | Within 8 Hrs |
| Hepatitis B Core IgM Antibody |  | All positives | First instance | Within 8 Hrs |
| Hepatitis B Surface Antigen (HBsAg)  |  | All positives | First instance | Within 8 Hrs |
| HIV-1/2 Exposure ScreenOn Source: Positive HIV-1/2HBsAG, and HCV |  | ALL associate exposures called by laboratory technologist | Always | Within 1 Hr |
| Rapid HIV, Hep B Ag, and HCV on Source |  |  |  |  |
| Herpes Simplex Virus (HSV) IgM,Antibodies |  | All positives(neonates, <30 days) | First instance |  Within 1 Hr   |
| Toxoplasma gondii Antibody, IgM |  | All positives | First instance | Within 8 Hrs  |

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| **Test** | **Critical Result** | Alerting Category | **Notification Rule** **(From detection)** |
| **MICROBIOLOGY** |  |  |  |
| Antigen test for:* Pneumocystis
* Cryptococcus
* Streptococcus pneumoniae
* Legionella
 | Positive | Always | Within 1 hour |
| Blood Culture | For 1st 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 **only** | Always | 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 |
| MEID Panel results  | All positives | Always | Within 1 hour |
| Gram Stains orderedSTAT 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 |
| Procalcitonin | >10 ng/mL | Always | Within 1 hour |
| Sexually transmitted infections* Neisseria gonorrhoeae
* Chlamydia trachomatis
 | **Positive for patients <13 years from any site.****Labor and Delivery** | Always | Within 1 hour |
| Recovery of these isolates **ANY** source | Identification of CRE, MDRAB, VRSA and VISA Cryptococcus speciesDimorphic fungiFrancisella speciesClostridium perfringensBordetella pertussisVibrio cholearaeE. coli O157Viruses from newborns up to 60 days old from any location**Inpatients only:** Norovirus, Astrovirus, Sapovirus  | First time recovery | Within 1 hour |

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| **Anatomic Pathology Critical Notification Results** |
| Applies to ALL categories (time frame depends on diagnosis and clinical status). See Anatomic Pathology policy. |
| Diagnoses or findings that, in the pathologist’s opinion, indicate a life threatening condition requiring immediate therapeutic intervention (i.e., vasculitis, tissue invasive infectious agents, organ transplant rejection.) |
| Unexpected diagnosis of malignancy or significant unexpected pathology at the discretion of the pathologist. (Adenocarcinoma in an incidental appendectomy, etc.) |
| Revised report for diagnostic change. |
| Discrepancy between frozen section and permanent section. |
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| **Transfusion Services Critical Notification Results** |
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| The following Transfusion Service laboratory results in the context of certain clinical situations are considered “critical” and must be immediately called to the patient’s RN and the Transfusion Services Medical Director, or Pathologist on-call.* 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 specimen.
* Hemolysis in the initial and redrawn post-transfusion reaction specimens.
* A positive antibody screen in a patient who received emergency-issued uncrossmatched RBC’s prior to the detection of an antibody(s).
* Incompatible crossmatch on a unit released as “emergency issue” in an emergent situation.
* Positive gram stain of the residual component involved in a transfusion reaction.
* RBC’s issued or transfused, and evidence of a possible mistyping discovered (e.g., ABO/Rh discrepancy on new specimen, evidence of wrong-blood-in-tube).
* Market withdrawal of a blood component because the co-component caused a potentially life-threatening reactions (eg.septic, transfusion related acute lung injury [TRALI]) in another patient, or was found to have a positive bacterial culture.
* Transfusion Reaction evaluation suggestive of an acute hemolytic transfusion reaction, bacterial contamination, TRALI, or other serious adverse event.
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OHL-SHA-fPO-02 INPATIENT, ED AND OTHER HOSPITAL BASED PATIENT CRITICAL VALUE NOTIFICATION LIST

 (OHL-SHA-PO-02)