Deaconess Hospital

LABORATORY

CHEMISTRY CRITICAL VALUES

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
24 hour Urine Protein for O.B.			>300mg/24hr	Pre-eclampsia
Bicarbonate (Serum)	<10 MEG/L	Complex interwoven pattern of acidosis, alkalosis and anoxemia	>40 MEG/L	Complex interwoven pattern of acidosis, alkalosis and anoxemia
Bilirubin, Neonatal			$\geq$ 15 mg/dl	
Bilirubin, Cord Blood			$\geq$ 3.0 mg/dL	
Calcium	<6 mg/dL	Tetany and convulsions	>14 mg/dL Newborn (0-3 mos.) >12 mg/dL	Coma
Ionized Calcium	<0.78 mmol/L		>1.57 mmol/L	
Glucose	<40 mg/dL	Brain damage	>500 mg/dL Newborn (0-3 mos.) >200 mg/dL	Diabetic coma
Magnesium	<1 mg/dL	Tetany	>5 mg/dL	Increase in atrioventricular conduction
Potassium	<2.5 mEq/L	Muscle weakness, paralysis, cardiac arrhythmia's	>6.5 mEq/L Newborn (0-3 mos.) >7 mEq/L	Cardiotoxicity with arrhythmia's
Sodium	<120 mEq/L	Dehydration and vascular collapse	>160 mEq/L Newborn (0-3 mos.) >155 mEq/L	Edema, hypervolemia, heart failure
pH (arterial capillary)	<7.2	Severe acidosis, life threatening	>7.6	Severe alkalosi, life threatening
p02 (arterial or capillary)	<40 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia		
PCO2 (arterial or capillary)	<20 mmHg Newborn (0-3 mos.) <30 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia	>70 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia

As of 04/21/2011

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THERAPEUTIC DRUG CRITICAL LEVELS

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Digoxin			>3.0 ng/mL	Gastrointestinal and CNS symptoms, disturbance of cardiac rhythm
Dilantin (Phenytoin)			>30 ug/mL	
Gentamicin			>12 ug/mL peak	Hypoventilation, ototoxicity, nephrotoxicity
Lithium			>2.0 mmol/L	
Phenobarbital			>40 ug/mL	nausea, vomiting, diplopia, dizziness, ataxia, lethargy, coma
Theophylline			>24 ug/mL	Nausea, insomnia, nervousness, headaches, arrhythmia's, seizures
Tobramycin			>12 ug/mL	Hypoventilation, ototoxicity, nephrotoxicity
Valproic Acid			>150 ug/mL	
Vancomycin			>80 ug/mL	

TOXICOLOGY DRUG CRITICAL LEVELS

	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Acetaminophen			>50	(potentially toxic if >12 hours since ingestion)
Alcohol			>400 mg/dL	
Salicylate			>30 mg/dL	

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HEMATOLOGY CRITICAL LEVELS

HEMATOLOGY CRITICAL VALUES

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Hematocrit	≤ 18%	Heart failure and anoxemia	None	
Hemoglobin	≤ 6 gm	Heart failure and anoxemia	≥20.0	
Platelet Count	≤ 20,000	Hemorrhage	≥ 1,000,000	Hemorrhage, thrombosis
INR	None		≥5.0 INR	Hemorrhage
I/T Ratio			> 0.25	
PFA	None		EPI >300 ADP >300	Hemorrhage
Low Molecular Weight Heparin	None		≥ 1.3 IU/mL	
IMNET I/T Ratio (Gateway Only)	None		>0.25	
NECT	<1.0		<0.5	
WBLSH	≤1.0			

OTHER SIGNIFICANT RESULTS

TEST	ACTION TAKEN
HIV from Source of Body/Blood fluid exposure	All are called to Deaconess Hospital Comp Center for DH/GWH exposures or to the phone number provided ASAP after screen results are obtained.
Hepatitis A Antibody	Positives are faxed to ordering physician and called to Infection Control (3449) on day shift Monday – Friday or to Vanderburgh County Health Department.
Hepatitis B Surface Antigen	Positives are faxed to the ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
Hepatitis C Antibody	Positives are faxed to the ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
HIV	Confirmed positives are faxed to ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.

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CRITICAL AND SIGNIFICANT RESULTS IN MICROBIOLOGY

The following **positive** cultures, stains or serological results are called to the physician OR to the unit where the patient is assigned. INPATIENTS: results are given to nurse caring for patient. They will notify physician. OUTPATIENT: results are given to office staff, nurse preferred. Critical values are called within 15 minutes of test result being known. Significant results are called within an hour of result.

Critical Value - Call within 15 minutes of result	
TEST	**RESULT CALLED**
Blood Culture	Bacteria or yeast seen on stain, positive rapid coagulase.
Blood Parasite Smear	First positive smear with % parasitemia.
CSF	Bacteria or yeast present in stain, growth in culture and sensitivity.

Significant Result – Call within 1 hour of result	
TEST	**RESULT CALLED**
AFB	Stain, culture, sensitivity results
Bordetella pertussis	Positive culture, DFA, PCR
Clostridium difficile toxins A & B	First positive test
Cryptococcal antigen	First positive test
ESBL Gram Negative Rods	First Positive Culture
Eye Culture	Positive culture if aspirate/scraping
Fungi	Significant isolate as Cryptococcus neoformans, Histoplasma, Blastomyces, Coccidioides, eye culture growing Fusarium.
Herpes Simplex	Positive culture from eye, sterile body site, tissue or any site for neonate/newborn
Influenza A and B (rapid test)	Positive to physician offices
Legionella Urinary Antigen	Positive
Multi Drug Resistant Organism	KPC, VISA, VRSA, Acinetobacter, Burkholderia and others considered MDRO (first isolate)
Neisseria meningitidis	Blood, sterile body site stain and/or culture
Penicillin resistant Streptococcus pneumoniae	First Positive
RSV (rapid test)	Positive to physician offices
Sterile body sites	Stain or positive culture
Streptococcus pneumoniae urinary antigen	Positive
Stool Pathogens	Salmonella, Shigella, Yersinia, Campylobacter, E. coli 0157, Vibrio, Aeromonas, Giardia or Cryptosporidium antigen, parasites, Shiga Toxin 1 or 2
Vancomycin Resistant Enterococcus (VRE)	First Positive
Viruses from Respiratory Culture	Adenovirus, RSV, Influenza A and B, Parainfluenza 1, 2, 3