



Critical Values are to be called:
As soon as the result is available
24 hours a day
For all patients, unless otherwise noted

Critical Values are for Blood unless otherwise noted

Analyte	Critical Value
Acetaminophen	Greater than 250 µmol/L
Acetone	Greater than 6 mmol/L
Amikacin	Pre: Greater than 10.0 mg/L Post: Greater than 40.0 mg/L Random: Greater than 40.0 mg/L
Amiodarone	Greater than 5.4 µmol/L
Ammonia	Less than 17 years: Greater than 110 µmol/L 17 – 150 years: Greater than 200 µmol/L
Bilirubin, Total	Less than 31 days: Greater than 300 µmol/L Piccolo (for VHF testing) only - Less than 31 days: greater than 313 µmol/L
Blood Gases	CLH OGH VCH: pH: Less than 7.30, greater than 7.51 pCO ₂ : Less than 20 mm Hg, greater than 70 mm Hg pO ₂ (arterial): Less than 60 mm Hg ACH BMSH CMGH DDHS FMC HRH PLC RGH SDHS SHC: pH: Less than 7.15, greater than 7.55 pCO ₂ : Less than 15 mmHg, greater than 55 mmHg if pH is less than 7.2 Bicarbonate (HCO ₃): Less than 10 mmol/L, greater than 40 mmol/L Hemoglobin: Less than or equal to 7 days: less than 100 g/L Greater than 7 days: less than 70 g/L ACH FMC PLC RGH SHC: ONLY Emergency Department Venous Blood Gas critical values performed by Chemistry at these sites are communicated by APL
Calcium, Total	Less than 1.65 mmol/L Greater than 3.25 mmol/L
Calcium, Free or Ionized	Less than 0.85 mmol/L Greater than 1.50 mmol/L
Carbamazepine	Greater than 65 µmol/L
Carboxyhemoglobin	Greater than 15%
Clozapine	Greater than 3500 nmol/L NOTE: When result is reported greater than 7 days post collection, result will be faxed
Desmethylclozapine	Greater than 2000 nmol/L NOTE: When result is reported greater than 7 days post collection, result will be faxed
Digoxin	Greater than 2.6 nmol/L



Analyte	Critical Value
Ethanol	Greater than 65.0 mmol/L NOTE: Not communicated to Emergency Departments at FMC, RGH, PLC and SHC
Ethylene Glycol	Greater than 2 mmol/L
Gentamicin	Pre: Greater than 1.9 mg/L Post: Greater than 14.9 mg/L Random: Greater than 14.9 mg/L
Glucose	Less than 30 days: Less than 2.0 mmol/L Greater than 24.9 mmol/L 30 days - 150 years: Less than 2.6 mmol/L Greater than 24.9 mmol/L
Iron	Less than 12 years: Greater than 54 µmol/L
Isopropanol	Greater than 8 mmol/L
Lactate	Greater than 4.0 mmol/L
Lithium	Greater than 2.00 mmol/L
Magnesium	Less than 0.40 mmol/L Greater than 1.90 mmol/L
Methanol	Greater than 2 mmol/L
Methemoglobin	Greater than 10 %
Oncology Cortisol	Oncology patients only: Less than 50 nmol/L
Osmolality	Acute Care Patients Only: Less than 250 mmol/kg Greater than 320 mmol/kg NOTE: Not communicated to Emergency Departments at FMC, RGH, PLC and SHC
Overdose Iron	Less than 12 years: Greater than 54 µmol/L
Phenobarbitol	Greater than 190 µmol/L
Phenytoin (Dilantin)	Less than 4 months: Greater than 80 µmol/L 4 months – 150 years: Greater than 120 µmol/L
Phenytoin, Free (Dilantin, Free)	Greater than 12.0 µmol/L
Phosphate	Less than 0.40 mmol/L
Potassium	Less than 29 days: Less than 3.0 mmol/L Greater than 6.4 mmol/L 29 days to 17 years: Less than 3.0 mmol/L Greater than 6.0 mmol/L Greater than 17 years: Less than 2.6 mmol/L Greater than 6.2 mmol/L
Primidone (Mysoline)	Greater than 70.0 µmol/L
Salicylate	Greater than 2.20 mmol/L
Sirolimus	Greater than 30 µg/L
Sodium	Less than 120 mmol/L Greater than 155 mmol/L



Analyte	Critical Value
Tacrolimus	Greater than 30 µg/L
Theophylline	Greater than 110.0 µmol/L
Tobramycin	Pre: Greater than 1.9 mg/L Post: Greater than 14.9 mg/L Random: Greater than 14.9 mg/L ACH CF patients: Greater than 25.0 mg/L
Troponin I, High Sensitivity - Access (CMGH HRH)	Greater than 49 ng/L
Troponin I - Stratus (CLH, DDHS, OGH, SDHS, VCH)	Greater than 0.50 µg/L
Troponin I - Triage Meter (ACH SHC)	Greater than 0.50 µg/L
Troponin I, High Sensitivity - mini VIDAS (HCTL BMSH OHWC)	Greater than 99 ng/L
Troponin T, High Sensitivity - Cobas 6000, Cobas 8000 (DSC FMC PLC RGH SHC)	Greater than 52 ng/L NOTE: Emergency and inpatient critical TNT will not be communicated by telephone; only physicians of community patients with a critical value will be contacted.
Valproic Acid	Greater than 1150 µmol/L
Vancomycin	Pre: Greater than 25.0 mg/L Random: Greater than 60.0 mg/L

NOTES:

- Critical values are test results that are so abnormal that they generally indicate severe illness and require immediate medical intervention. For this reason, these values must be communicated to the attending physician immediately (Refer to **AD10-2.130 Critical and Notifiable Result Reporting**)
- While critical values are generally indicative of acute disease requiring intervention, there are some patients with marked metabolic derangements that are physiologically fairly well compensated. For example, renal patients can have chronically elevated potassium levels that are surprisingly well tolerated. A general rule of thumb is that chronic changes in physiological status are much better tolerated than rapid alterations.
- Some physicians or units may decline communication of critical values. In these cases, written documentation must be produced for the laboratory to comply with this request.