

HIGH-RISK / CRITICAL RESULT NOTIFICATION

High-risk and critical results are results which require communication in a timely manner because they indicate a potential risk to the patient and require the immediate attention of the clinical team.

Laboratory Services takes all high risk/critical results seriously and will ensure these results are communicated as quickly as possible to the responsible clinical team, as outlined in internal procedures.

Escalation processes are in place if we are unable to reach the clinical team in a timely manner.

BIOCHEMISTRY - GENERAL CHEMISTRY				
Analyte	Units	Age	Critical Low	Critical High
Ammonia	µmol/L	All ages		75.0
Total Neonatal Bilirubin	µmol/L	All ages		300.0
Unconjugated Bilirubin	µmol/L	All Ages		250.0
Conjugated Bilirubin*	µmol/L	All Ages		50.0
C Reactive Protein	mg/L	All Ages		200.0
Calcium	mmol/L	All ages	1.8	3.0
Creatinine	µmol/L	All ages		300.0
Glucose Fasting	mmol/L	All ages	2.2	20.0
Glucose Random*	mmol/L	All ages	2.2	20.0
Magnesium*	mmol/L	All ages	0.6	1.5
Potassium*	mmol/L	0-7 days	3.0	6.3
		7 days-6 months	3.0	6.5
		>6 months	3.0	5.9
Sodium	mmol/L	All ages	128.0	150.0
Total CO2	mmol/L	All ages	15.0	35.0
hs Troponin I	ng/L	All ages	All results	
Urea	mmol/L	All ages		20.0
BIOCHEMISTRY - THERAPEUTIC DRUG MONITORING				
Acetaminophen	µmol/L	All ages		All results

* Critical ranges in ICU areas differ based on consultation with stakeholders.

HAEMATOLOGY - Full Blood Count					
Analyte	Units	Condition / Age	Critical Low	Critical High	Comments
Haemoglobin	g/L	< 7 Days	<80		
		> 4 Days		> 180	
		> 7 Days	< 50		
Malaria			Positive		
Neutrophils Absolute	x 10 ⁹ /L	All ages	< 0.5		Oncology patient excepted unless it's an unexpected result
Platelets	x 10 ⁹ /L	All ages	< 50		
WBC	x 10 ⁹ /L	All ages	< 0.5	> 50	
Blood Film			Acute Haemolysis		New presentation
			Blasts		
			Leukaemia – relapsed		
			Malaria parasite present		
			Megaloblastic features		

HAEMATOLOGY – Coagulation					
Anti Xa	IU/mL	All ages		> 1.4	
APTT	secs	All ages		> 120	RCH Rosella notify only APTT > 180 secs
Fibrinogen	g/L	All ages	< 0.7		
		Pregnant	< 1.5		
INR	ratio	Not on warfarin		> 2	New presentation. Notification not required for RCH Rosella.
		on warfarin		> 5	

HAEMATOLOGY - Blood Transfusion	
Blood Group mismatch with historical results (? Wrong blood in tube)	
Delay or inability to complete testing or provide blood products	
Positive Direct Antiglobulin Test (DAT)	First Presentation only
Positive Fetal Maternal Haemorrhage (FMH) >6mL	
Transfusion reaction suggestive of serologic incompatibility	
Transfusion reaction when there is a possibility bacterial transmission	

MICROBIOLOGY	
Test	Criteria
Blood culture	Initial positive blood culture gram stain
CSF	Abnormal white cell count. Positive gram stain. Nucleic acid detection of targets.
Eye swabs	Gram negative diplococci resembling <i>N. gonorrhoeae</i> . Growth of <i>N.gonorrhoeae</i> .
Peritoneal Dialysis Fluid	Positive gram stain
Other Sterile sites	Positive gram stains from sterile sites excluding drain fluid, abscesses, intrabdominal fluid from ruptured appendicitis or bowel perforation.
Varicella Zoster nucleic Acid Detection	Positive for Varicella Zoster Virus
Bordetella pertussis nucleic acid detection	Positive for <i>Bordetella pertussis</i>
Herpes simplex nucleic acid detection	From all sites which are Positive and age <3 months
Measles nucleic acid detection	Positive for Measles virus