

Biochemistry Critical Results Telephone Limits

- **Notes for laboratory:** Those in **Red** should be called at all times (in and out of hours)
- Those in **Black**. For GP and Out-patients patients should only be called in hours (Monday to Friday 08:00 – 18:30) or the next day (inc Sat and Sun 09:00 – 17.30).
- These limits are based on the **FIRST SET OF MARKEDLY ABNORMAL RESULTS that may be life threatening or of immediate clinical significance. Subsequent results** may be telephoned depending on particular change or deterioration as felt significant by a qualified member of staff. Other abnormal results for less frequently requested tests may be telephoned if considered significant by a qualified member of staff.

ANALYTE	INITIAL RESULT		UNITS	NOTES
Renal Function				
Sodium ≥ 16 years old	≤ 120	≥ 155	mmol/L	Check previous results in Telepath. Add serum osmo to 1st sodium results that are ≤ 120 mmol/L with a comment to request and send urine for Na/Osmo. Re-phone if result has continued to deteriorated by an increase or decrease of 8 mmol/L since previously phoned.
<16 years old	≤ 130	≥ 150	mmol/	
Potassium	≤ 2.5	≥ 6.5	mmol/L	≤ 2.5 add magnesium Check previous results in Telepath. Re-phone if result has continued to deteriorate by an increase or decrease of 1.5 mmol/L since previously phoned.
Creatinine ≥ 16 years old	-	≥ 300	umol/L	Add urea
<16 years old	-	≥ 200	umol/l	Add urea
Urea ≥ 16 years old	-	≥ 30	mmol/L	
<16 years old	-	≥ 10	mmol/L	
AKI	-	2 or 3		All new occurrences
Liver function				
Alanine transaminase (ALT) ≥ 16 years old		≥ 600	U/L	If raised in isolation add CK & γGT
<16 years old		≥ 500	U/L	
Aspartate transaminase (AST)	-	≥ 600	U/L	
Albumin (GP's Only)	≤ 20	-		
Ammonia	-	> 100	umol/L	
Amylase	-	≥ 500	U/L	
Calcium (adjusted)	≤ 1.80	≥ 3.50 ≥ 3.00	mmol/L	≤ 1.80 add Magnesium
Carbamazepine	-	≥ 25	mg/L	Confirm time of last dose
Creatine Kinase (CK)	-	≥ 5000	U/L	
C-Reactive protein (CRP) (GP's Only)	-	≥ 300	mg/L	
Cortisol	≤ 150	-	nmol/L	Confirm not Post Dexamethasone. If 30 mins post SST is ≤ 250 phone
Conjugated Bilirubin		≥ 25	umol/L	Neonates only
Digoxin	-	≥ 2.5	µg/L	Confirm time of last dose
Gentamicin	-	≥ 2.0	mg/L	Confirm time of last dose
Glucose (Known diabetic)	-	≥ 25	mmol/	
(Unknown) ≥16 years old	-	≥ 20	mmol/l	
<16 years old	-	≥ 15	mmol/L	
HbA1c	-	>97	mmol/mol	Endo consultants OP requests and when HBD with no previous glucose phoned.
Lithium	-	≥ 1.5	mmol/L	Confirm time of last dose

Magnesium	≤ 0.40	≥ 3.00	mmol/L	Add Renal and Calcium
Phenytoin	-	≥ 25	mg/L	Confirm time of last dose
Phosphate	≤ 0.30	-	mmol/L	Add Magnesium
Theophylline	-	≥ 25	mg/L	Confirm time of last dose
Thyroid Hormones TSH	-	≥ 100	mU/L	
ft4	-	≥ 50	pmol/L	Confirm TSH is suppressed, and call both results
Triglycerides	-	≥ 40	mmol/L	
Tumour Markers	Do	Not	Phone	
Vancomycin	-	≥ 20	mg/L	Confirm time of last dose
Xanthochromia	Telephone positive results to requesting clinician			

For further information refer to Biochemistry Telephoning SOP (RWF-BS-BIO-SOP19).

Reference -Royal College of Pathologist (G158) – ‘The communication of critical and unexpected pathology results’. (V1 Oct 2017)