

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	
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	≤ 50	-	nmol/L	During routine hours: Clinical Scientist to confirm not Post Dexamethasone. If 30 mins post SST is ≤ 250 phone. Out of hours: BMS staff need to confirm not post dexamethasone. Contact Consultant for advice if required.
Conjugated Bilirubin		≥ 25	umol/L	Neonates only
Digoxin	-	≥ 2.5	µg/L	Confirm time of last dose
Ferritin	-	>9999	µg/L	For HLH diagnosis
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)

An agreement has been reached between the department of the chemistry and gynaecology/obstetric (Dr Oliver Wildman in charge of updating hypertension guidelines at MTW NHS trust) there is NO need to phone serum Urate level during pregnancy, however, they will need to request urate at any time part of the pre-eclampsia screening using the PREP-s algorithm for calculating the need for delivery. (RCPATH Guidelines on Urate: Urate Level Reporting Protocol During Pregnancy)