Critical telephoning limits

The below table lists the criteria for telephoning results, by analyte. OP = Outpatients location, IP = Inpatient location

Extracted from controlled document: **PROCEDURE FOR TELEPHONING CRITICALLY ABNORMAL RESULTS,** CHE/SOP/088 version 8 (September 2026). Next review due: September 2028.

TELEPHONE ACTION LIMITS **IP = INPATIENT; OP = OUTPATIENT; NCE = NEW CARE EPISODE (≥5 days or new attendance at an Emergency Portal)**

			If previous result phoned		
Analyte	**Low**	**High**	**Always Phone**	**Significant worsening**	**Comments**
Adjusted Calcium (mmol/L) [a]	≤1.8	≥3.5	GP & OP IP if NCE	If worsened by ≥0.3 (e.g., if previous 1.7 telephone ≤1.4)	
AKI [a]	Level 2 and 3. Level 1 if K^+ >6 mmol/L			First time result only, unless no AKI or lower level in between. Phone if previously level 2 and now level 3.	• **Phone to GP and OP** • **Do not phone dialysis patients** • **AKI's breaching the criteria need to be called for Dudley and SWBH** • **Phoning not required at RWT for all IP & at Walsall for ≥18 years IP**
ALT Adult (IU/L) [a]		≥825		Doubling	
ALT <16 y [b] (IU/L)		≥500		Doubling	
Ammonia (µmol/L) [a]		≥100	All		
Amylase ≥18 y (IU/L) [a]		≥500	GP & OP IP if NCE	Doubling	
Amylase 1y to <18y (IU/L) [a]		≥505	GP & OP IP if NCE	Doubling	
Amylase 13 w to <1 y (IU/L) [a]		≥250	GP & OP IP if NCE	Doubling	
Amylase 15 d to <13 w (IU/L) [a]		≥110	GP & OP IP if NCE	Doubling	
Amylase ≤ 14 d (IU/L) [a]		≥50	GP & OP IP if NCE	Doubling	
AST (IU/L) [a]		≥510		Doubling	

Bicarbonate (mmol/L) [a]	≤10		All		
Bile Acids (µmol/L) [b]		≥19		Doubling	**Pregnancy only**
Bilirubin (µmol/L) [b]		>250	Community midwife & GP	if worsened by ≥10 (e.g. if previous 251 telephone ≥261)	**All infants <3 months ONLY irrespective of location**
Blood Gas [b]	All results				
Carbamazepine (mg/L) [b]		>15	All		
Ciclosporin (µg/L) [b]		≥150	All		
Conjugated bilirubin (µmol/L) [a]		≥25	Community midwife & GP	if worsened by ≥10 (e.g. if previous 26 telephone ≥36)	**All infants < 3 months ONLY irrespective of location**
Cortisol (nmol/L) [b]	< 100		All		**Exclusion: post-dexamethasone suppression test**
CK (IU/L) [a]		≥5000		Doubling	
Creatinine >17 y (µmol/L) [a]		≥354		Doubling	**Exclusions: dialysis patients, renal OPD out of hours – phone next working day, RWT Haematology consultants after 10 PM – phone the next day**
Creatinine (by dilution) – Adult with Hepatorenal syndrome** (µmol/L) [b]**		>125		Doubling	**Not for dialysis patients**
Creatinine 1-17 y (µmol/L) [a]		≥200		Doubling	**Not for dialysis patients**
Creatinine <1 y (µmol/L) [a]		≥100		Doubling	**Not for dialysis patients**
CRP (mg/L) [a]		≥300	GP & OP		**GP/OP only**
Digoxin (µg/L) [a]		≥2.5	All		
Ethanol ≥18 y (mg/L) [b]		≥3000	All		
Ethanol <18 y [a]	All detectable results		All		**<12-year-old patients - sample sent to Toxicology for confirmation**
Free T4 (pmol/L) [b]	<5.4	>50	**All**		**If out of hours, telephone the next working day for GP & OP. Second sample result not phoned. Phone subsequently if results significantly improve and then worsen to meet phone criteria**
Glucose ≥18 y – non-diabetic **Glucose ≥18 y – diabetic (mmol/L) [a]**	≤2.5 ≤2.5	≥25 ≥30	All GP & OP IP if ≤2.5 IP if NCE	if high & worsened by 5 (e.g. if previous 31 telephone ≥36)	

Glucose <18 y (mmol/L) [a]	≤2.5	≥15	All GP & OP. IP if ≤2.5 IP if NCE	if high & worsened by 5 (e.g. if previous 20 telephone ≥25)	
HbA1c <18y – non-diabetic (mmol/mol) [b]		>120	All		**Only phone if no glucose result**
17-Hydroxyprogesterone (nmol/L): [b] **Neonates ≤30 days only** **Adults ≥18 years**	 ≥15 ≥25		 All First time		
Intraoperative PTH (ng/L) [b]	All results		All		
Immunofixation (urine) [b]	1st time positive		All		
Iron (µmol/L) [b]		>50	See comment		**'Overdose' in the clinical details or from Emergency Department**
Lithium (mmol/L) [a]		≥1.5	All		
Lipase (IU/L) [a]		≥300	GP & OP IP if NCE	Doubling	
Magnesium (mmol/L) [a]	≤0.4		GP & OP IP if NCE	Halving	
Paracetamol [b]	If detected		All		
Paraprotein (g/L) [b]	**First time paraprotein:** IgG >15 g/L IgA >10 g/L IgM >10 g/L				Paraprotein above the quoted levels on a new patient should be telephoned to the requesting clinician the same day
Phenobarbitone (mg/L) [b]		>70	All		
Phenytoin (mg/L) [a]		≥25	All		
Phosphate (mmol/L) [a]	≤0.3		GP & OP IP if NCE	Halving	
Porphobilinogen (PBG)/Creatinine (Urine) (µmol/mmol) [b]		≥1.5	All		
Potassium (mmol/L) (plasma) [b]	≤2.5	≥6.0	GP & OP IP if NCE		

Potassium (mmol/L) * (serum) [a]	≤2.5	≥6.5	GP & OP IP if NCE	If worsened by ≥0.3 (e.g. if previous 2.4 telephone ≤2.1 or if previous 6.6 telephone ≥6.9)	**For pre and post dialysis – see below**
Potassium (mmol/L) (serum) [b]	≤2.5	≥7.0	All		**Pre dialysis patients only**
	≤2.0	≥6.5	All		**Post dialysis patients only**
Salicylate [b]	If detected		See comment		**Subsequent results not phoned if levels are decreasing**
Serum Free Light Chains[b]**:** **Kappa:Lambda Ratio** **Kappa or Lambda level**	<0.01	>100 ≥ 500		First time abnormal results, or doubling of previous level	
Sirolimus (ug/L) [b]		≥15	All		
Sodium ≥16 y (mmol/L) [a]	≤120	≥160	GP & OP IP if ≤110 IP if NCE	If worsened by ≥5	e.g. if previous 119 telephone ≤114 or if previous 160 telephone ≥165
Sodium <16 y (mmol/L) [a]	≤130	≥160	GP & OP IP if ≤110 IP if NCE	If worsened by ≥5	e.g. if previous 120 telephone ≤115 or if previous 160 telephone ≥165
Synacthen test - Cortisol (nmol/L) [b]	<430		All		**Applies to 30-minute sample only**
Tacrolimus (µg/L) [b]		≥15	All		
Testosterone - females [b]		≥ 5	See comment		**Phoning at the discretion of the Duty Biochemist**
Theophylline (mg/L) [a]		≥25	All		
Triglyceride (mmol/L) [b]		>20	GP/OPD IP if NCE	**Doubling**	**If out of hours, telephone the next working day for GP & OP. Results should be phoned again even if high in a previous episode**
Troponin I (ng/L)** [b]		≥5	GP & OP		**Phone GP & OP only. Read out the comment. <5 ng/L rule out for low-risk patients**
Urate (µmol/L) [a]		≥340		Doubling	**Antenatal locations only**
Urea ≥18 y (mmol/L) [a]		≥30		Doubling	• **Not for dialysis patients.** • **Do not phone renal OPD out of hours – phone next working day.** • **Do not call RWT Haematology consultants after 10 PM – phone the next day**

Urea <18 y (mmol/L) [a]		≥10		Doubling	**Not for dialysis patients**
Valproate (mg/L) [b]		>150	All		
Xanthochromia [b]	All positive results				

* Ward contacted if NNU potassium results are haemolysed

** Requestor informed if the troponin I result cannot be generated for any reason

**** When creatinine has been manually diluted owing to high icteric index

[a] Source of telephone limit: Royal College of Pathologists: The communication of critical and unexpected pathology results (2017) https://www.rcpath.org/static/bb86b370-1545-4c5a-b5826a2c431934f5/The-communication-of-critical-and-unexpected-pathology-results.pdf

[b] Source of telephone limit: BCPS consensus