

Changes to Aotea Pathology protocols for reporting critically abnormal results.

From 10th April 2014 some of our protocols for reporting critically abnormal results (critical action limits) will change. When a laboratory result falls above or below a level deemed to be of clinical significance, the laboratory will fax or phone the requestor with these results. These critical action limits have been published on the Aotea Pathology website since March 2012 and have recently been reviewed. Where possible we have aligned critical action limits with other laboratories in the region, taking into consideration differences between hospital and community practise. All critical action limits are approved by the relevant pathologist. The table below summarises the tests where changes to critical action limits have been made.

The full list can be found on the following page.

These changes will be in use as of 10th April 2014, and will also be available on the Aotea Pathology website <http://www.apath.co.nz> from this date.

Test Name	Units	Fax limits		Phone limits	
		Lower	Upper	Lower	Upper
BIOCHEMISTRY					
Sodium	mmol/L	<125	Now: No critical action limit (Previously >155)	<120	Now: >155 (Previously >160)
Adjusted Calcium	mmol/L	Now: No critical action limit (Previously <1.80)	>2.80	Now: <1.80 Previously <1.60	>3.00
Phosphate	mmol/L	Now: No critical action limit (Previously <0.5)	Now: No critical action limit (Previously 3.0 - 4.0)	Now: <0.5 (Previously <0.3)	Now: >3.0 (Previously >4.0)
Carbamazepine	µmol/L	No critical action limit	Now: No critical action limit (Previously >42)	No critical action limit	Now: >50 (Previously >55)
Lithium	mmol/L	1.0-1.2	No critical action limit	Now: No critical action limit (Previously 1.0-1.2)	>1.2
Phenytoin	µmol/L	>80	No critical action limit	Now: No critical action limit (Previously >80)	>90
Valproate	µmol/L	>700	No critical action limit	Now: No critical action limit (Previously >700)	>800
HAEMATOLOGY					
Platelets	x 10 ⁹ /L	<80	No critical action limit	Now: <20 (Previously 40)	No critical action limit
MICROBIOLOGY					
Added: Sterile fluid culture (Previously: No critical action limits)	N/A			All positive growths are brought to the attention of the clinical microbiologist	

Please direct any questions regarding these changes to the relevant pathologist: (04) 381 5900 or via email

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AOTEA PATHOLOGY CRITICAL ACTION LIMITS

AOTEA
PATHOLOGY

TEST NAME	UNITS	FAX LIMITS		PHONE LIMITS		COMMENTS
		LOWER	UPPER	LOWER	UPPER	
BIOCHEMISTRY						
Sodium	mmol/L	<125		<120	>155	Results that are stable at these levels or are accompanied by clinical information supporting these levels may be faxed instead of phoned.
Potassium	mmol/L	2.7-3.5	>5.6 to 5.9	<2.7	>5.9 – 6.5 >6.5	Results that are stable at these levels or are accompanied by clinical information supporting these levels may be faxed instead of phoned. Age of sample, presence of haemolysis and time elapsed between collection and separation are taken into consideration when evaluating these results and may influence whether results are phoned or faxed.
Creatinine	µmol/L		>300			At first presentation.
Urea	mmol/L		>20			Results will be faxed if urea is >20 mmol/L with creatinine <160 µmol/L at first presentation.
Uric Acid	mmol/L		Preg >0.34		Preg >0.45	
Adjusted Calcium	mmol/L		>2.80	<1.80	>3.00	Results that are stable at these levels or are accompanied by clinical information supporting these levels may be faxed instead of phoned.
Magnesium	mmol/L	<0.60		<0.50	>2.0	
Amylase	IU/L		>150		>400	Results that are stable at these levels may be faxed instead of phoned.
Phosphate	mmol/L			<0.5	>3.0	Age of sample and time elapsed between collection and separation are taken into consideration when evaluating these results and may influence whether results are phoned or faxed.
Total Bilirubin – adults	µmol/L		>400			At first presentation. As significant haemolysis may cause underestimation of bilirubin, results falling outside these limits may be faxed.
Total Bilirubin – paediatric patients	µmol/L	All Paediatric results <250 are faxed		All paediatric results ≥250 are phoned		As significant haemolysis may cause underestimation of bilirubin, results falling outside these limits may be phoned.
ALT	IU/L		>1000		>3000	ALT >1000 Faxed at first presentation. ALT >3000 along with Total Bilirubin >100 µmol/L will always be phoned.
AST	IU/L		>1000		>3000	AST >1000 Faxed at first presentation. AST >3000 along with Total Bilirubin >100 µmol/L will always be phoned.
Carbamazepine	µmol/L				>50	
Hs Troponin	ng/L	All results are faxed			≥14	At first presentation. As significant haemolysis may cause underestimation of Hs Troponin, results falling outside these limits may be phoned.
CKMB	ng/mL	All results are faxed				
Glucose	mmol/L	<2.0	>25 (Patient not known to have diabetes) >30 (Patient known to have diabetes)	1.5-2.5	>30 (Patient not known to have diabetes) >35 (Patient known to have diabetes)	The presence of ketones may alter whether a result is faxed or phoned. Consideration of specimen type (serum or fluoride plasma) may influence whether a result is faxed or phoned.
Lithium	mmol/L	1.0-1.2			>1.2	
Phenytoin	µmol/L	>80			>90	
Valproate	µmol/L	>700			>800	
Cortisol	nmol/L	<150				
Serum Ketones				≥ +	≥ ++	
Urine Ketones				≥ +	≥ ++	
HAEMATOLOGY						
Haemoglobin	g/L			<80	>200	
Platelets	x 10 ⁹ /L	<80		<20		
Neutrophils	x 10 ⁹ /L	<1.0		<0.5	>20 >15	If clinical details of abdominal pain, cough, SOB or infection.
INR	Ratio				>4.5	Results >5.0 are phoned at all times. Results >4.5 but <5.0 afterhours are faxed and then followed up with a phone call the next day.
Fibrinogen	g/L			<1.0		
D-Dimer	ng/mL	All results are faxed			>500	
ESR	mm/hr				>100	Phoned only where there are clinical details of temporal arteritis.
MICROBIOLOGY						
Blood culture	N/A			All positive blood culture results are phoned as urgent		
Scope washings	N/A	All positive endoscope and bronchoscope results are faxed				
Sterile fluid culture	N/A			All positive growths are brought to the attention of the clinical microbiologist		The clinical microbiologist phones through significant results.