# ALLINA HEALTH LABORATORY

## Memo

**To:** Allina Health Laboratory outreach clients

From: Allina Health Laboratory outreach services

Date: December 28, 2022

**Re:** Updated Results that Require Action

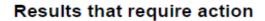
Allina Health Laboratory has reviewed and updated the Results that Require Action list that will go into effect January 3, 2023. This will replace the current document listed on the Reference ranges/Critical values - Allina Health Laboratory.

Allina Health laboratory staff will make the required result calls per this list. Results that were once deemed "courtesy calls" have been eliminated and are no longer documented by laboratory staff.

Included in this message is the revised version.

If you have any questions about this transition, please contact your Allina Health Laboratory Account Representative.







#### CHEMISTRY

Test name/number		Age/sex	Low	High
Ammonia	27			>110 µmol/L
Bilirubin, total	46	<17 yrs		> 14.9 mg/dL
Calcium	56		< 6.0 mg/dL	> 13.0 mg/dL
Calcium, ionized	8141		< 0.80 mmol/L **Excludes POCT	> 1.55 mmol/L "Excludes POCT
CK, Total	80			> 1500 IU/L ambulatory only
CO2 (bicarbonate)	73		< 10 mmol/L	> 40 mmol/L
Creatinine	82	< 4 yrs		> 1.5 mg/dL
	Ī	5 – 9 yrs		> 2.4 mg/dL
		10 – 14 yrs		> 3.0 mg/dL
		15 yrs - Adult		> 7.0 mg/dL ambulatory only
*Glucose, newborn		0 – 4 hrs	< 35 mg/dL	>300 mg/dL
*Glucose, pediatric		5 hrs- 17 yrs	<54 mg/dL	>400 mg/dL
*Glucose, adult		>18 yrs	<54 mg/dL	>500 mg/dL
Glucose, CSF	9110		< 40 mg/dL	> 250 mg/dL
Lactate, venous	12616			>2.0 mmol/L (First time in 24 hour) **Excludes POCT
Lactate, arterial	12603			>1.8 mmol/L (First time in 24 hour) "Excludes POCT
Magnesium	175		< 1.2 mg/dL	> 5.9 mg/dL
Phosphorous	205		< 1.0 mg/dL	> 10.0 mg/dL
Potassium	211		< 2.8 mmol/L	> 6.0 mmol/L
Sodium	233		<120 mmol/L	>160 mmol/L

<sup>\*\*</sup>Examples of Point-of-Care Testing (POCT) include iSTAT testing within the emergency department and hospital units. POCT does NOT include urgent care and ambulatory clinic laboratories. Point-of-Care Testing (POCT) is defined as tests designed to be used at or near the site where the patient is located, that do not require permanent dedicated space, and that are performed outside the physical facilities of the clinical laboratories.



<sup>\*</sup> No call if collected within 30 minutes of a glucose meter result.



# Results that require action

#### **BLOOD GASES AND CO-OXIMETRY**

Test name	Age/sex	Low	High
pH, cord (arterial/venous)		<7.00 **Excludes POCT	
Base excess, cord (arterial/venous)		≤ -16 **Excludes POCT	
pH		<7.20 **Excludes POCT	>7.60 **Excludes POCT
pO2, arterial		<40 mmHg **Excludes POCT	
pCO2		<20 mmHg (First time in 24 hour) **Excludes POCT	>70 mmHg (First time in 24 hour) "Excludes POCT
Bicarbonate HCO3 (Art/venous)		<11 mmol/L (First time in 24 hour) "Excludes POCT	
Carboxyhemoglobin			>20 %

#### **BLOOD BANK**

Emergency issuance of blood – crossmatch is subsequently positive	Urgently
Inability to procure blood or blood components	called

#### COAGULATION

Test name/number		Age/sex	Low	High
APTT, newborn	490	0-28 days		> 60 seconds
APTT, inpatient	490			>149 seconds
APTT, ambulatory	490			>60 seconds
Factor X Chromogenic	5767		<10%	

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# Results that require action

#### COAGULATION continued

Test name/number		Age/sex	Low	High
Fibrinogen	101		<100 mg/dL	
Heparin antibodies	8771			Positive,
	8775			indeterminate
		0 – 2 months		> 1.3
INR	487	3 – 5 months		>1.7
		6 months -		>6.0
		adult		

#### **HEMATOLOGY**

Test name	Age/sex	Low	High
Anaplasma/Ehrlichia			Any seen
Hemoglobin	0 – 7 days	<13.5 g/dL	>24 g/dL
		**Excludes POCT	**Excludes POCT
	8 – 30 days	<7.0 g/dL	>24 g/dL
		**Excludes POCT	**Excludes POCT
	≥ 31 days	<7.0 g/dL	>20 g/dL
	_	**Excludes POCT	**Excludes POCT
Platelet count		<20,000 /mm <sup>3</sup>	>1 million
White blood cell count	0 – 28 days	<5.0 x 10 <sup>3</sup> /mm <sup>3</sup>	>35.0 x 10 <sup>3</sup> /mm <sup>3</sup>
	≥ 29 days	<1.0 x 10 <sup>3</sup> /mm <sup>3</sup>	>50.0 x 10 <sup>3</sup> /mm <sup>3</sup>
White blood cell count, CSF			>25 /mm <sup>3</sup>

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# Results that require action



# MICROBIOLOGY

Organism/Test	Result
Test Results	
Clostridium difficile toxin PCR	Positive or invalid Inpatients only
Cryptococcal antigen, CSF	Positive
Meningitis/Encephalitis (ME) Pathogen Multiplex PCR panel, CSF	Positive or invalid
Mycobacterium TB PCR	Positive or invalid
Streptococcus pneumoniae antigen positive, CSF only	Positive (CSF only)
Shiga toxin, stool PCR (E. coli O157:H7)	Positive
Vibrio, stool PCR	Positive
Gram stain and cultures	•
Amniotic fluid	
Blood	7
Bone Marrow	7
Normally sterile explanted hardware such as pacemaker,	
screws, and plates	
CSF	Positive/ growth (First time only)
Normally sterile deep tissue such as brain/heart/liver	
Normally sterile body fluids	
Eye - vitreous fluid, comea, surgical eye specimens (excluding eye swab samples)	Positive/growth (First time only) No lab calls for eye swab cultures.
Highly pathogenic organisms	•
Bacillus anthracis	
Blastomyces	
Brucella	
Burkholderia mallei	
Burkholderia pseudomallei	
Clostridium botulinum	Donitive (see of the
Coccidiodes immitis/posadasii	Positive/growth
Francisella tularensis	7
Highly significant unusual pathogens (discretion by Micro Technical Advisor)	
Histoplasma capsulatum	7
Paracoccidiodes	7
Yersinia pestis	<u> </u>







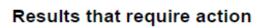
## MICROBIOLOGY continued

Zygomycete from sinus, eye, nose	Positive/growth (First time only)
MRSA, VRE, ESBL, and Carbapenemase	First isolation from culture on inpatients only
production	
Acid fast bacilli	
Acid fast bacilli on culture	
Acid fast smear positive	Positive/growth (First time only)
Mycobacterium TB identification	

### **TOXICOLOGY**

Test name/number		Low	High
Acetaminophen	920		>100 µg/mL
Carbamazepine	952		> 15.0 µg/mL
Digoxin	92		> 2.5 ng/mL
Gentamicin, peak	826		> 12.0 µg/mL
Gentamicin, random	832		> 12.0 µg/mL
Gentamicin, trough	827		> 1.5 µg/mL
Lithium	169		> 1.5 meq/L
Phenobarbital	207		> 50 µg/mL
Phenytoin, free	1993		> 3.0 µg/mL If total phenytoin is >30 no call
Phenytoin, total	91		> 30 µg/mL
Salicylate	228		> 35 mg/dL (First time in 24 hour)
Tobramycin, peak	849		> 12.0 µg/mL
Tobramycin, random	833		> 12.0 µg/mL
Tobramycin, trough	829		> 1.5 µg/mL
Valproic acid, free	6539		> 40 µg/mL If total valproic acid is >150 no call
Valproic acid, total	949		> 150 μg/mL







## **TOXICOLOGY** continued

Test name/number		Low	High
Vancomycin, Peak	964		> 60 µg/mL
Vancomycin, Trough	963		>25 µg/mL

