

EXPEDITED REQUESTS CRITICAL AND ALERT VALUES

LIST OF TESTS HANDLED ON AN URGENT BASIS

The following tests are available on an urgent basis through LifeLabs. Depending on location and weather conditions, results are typically available within 6-12 hours.

Urgent results are communicated 24 hours a day, 7 days a week, including statutory holidays. Unless otherwise specified by the ordering healthcare provider, urgent results are communicated by telephone.

Only the tests listed below are eligible for urgent ordering:

AMYLASE	LIPASE
NEONATAL BILIRUBIN	MALARIA SMEAR
CALCIUM	POTASSIUM
CHLORIDE	PROTHROMBIN TIME/INR
CREATININE	SODIUM
CBC	UREA
GLUCOSE	

It is important that ordering providers are aware that tests ordered as urgent may result in attempts to communicate results outside of regular office hours, including overnight.

Note: If an order is received with an inappropriate URGENT designation (whether collected by a healthcare provider or submitted by a patient at a Patient Service Centre), the test will automatically be downgraded to ASAP (As Soon As Possible) status.

ASAP (AS SOON AS POSSIBLE)

You may request special communication of test results as soon as they become available. Results will be provided at the earliest opportunity during your regular office hours. Autofax is the method of delivery.

Turnaround times depend on the test requested; however, routine test results are generally communicated within 24 hours.

To ensure timely communication, contact information must be provided. If contact details are not available, results will be reported through the routine process unless they contain alert or critical values.

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REPORTING OF CRITICAL & ALERT VALUES

EXPEDITED REPORTING BASED ON TEST RESULTS

LifeLabs and other OAML Laboratories have agreed to a defined schedule of test results that must be communicated directly to physicians based upon the two result categories described below. These reporting limits have been defined specifically for a community laboratory environment and are based on published literature as well as laboratory experience.

Laboratories have an obligation to communicate these abnormal results. **The ordering physicians have the professional responsibility to provide the laboratory with contact information**, which will allow direct communication of these results to the physician (or delegate providing coverage during absences). *If we do not already have this information, please complete the **Client Information Form** and return to your local LifeLabs location or fax to 905-795-9891.*

There will be situation when a markedly abnormal result is not expected. Certain critical values may be frequently expected in certain types of specialist practice. Under these circumstances an exception to a calling protocol may be made when a physician communicates this on the laboratory requisition or in writing to the laboratory. Specific exception to calling guidelines may be made on written requests to the Laboratory Director.

Note: Blanket exception to calling is considered medically unacceptable by the College of Physicians and Surgeons of Ontario and cannot be honored by LifeLabs.

CRITICAL VALUE

A critical value is a test result that may indicate an immediate risk to a patient's health and requires prompt medical attention. These results show a significant deviation from established reference ranges and may suggest a potentially life-threatening condition if unexpected.

Critical results are communicated to the ordering healthcare provider 24 hours a day, 7 days a week, including statutory holidays. To support timely patient care, LifeLabs communicates all critical results directly to the ordering healthcare provider by telephone.

Exceptions to the Reporting protocol:

Microbiology

When a preliminary report which is considered critical is successfully communicated by the laboratory, further preliminary and the final microbiology report will not be communicated as a second critical value. It is the responsibility of the ordering physician to obtain additional information from the final report when away from the office or when this is required for confirmation of the appropriateness of treatment.

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ALERT VALUE

An alert value is a test result that shows a significant deviation from the reference range and, if unexpected, may indicate the need to reassess the patient's clinical situation before the final report is received through routine channels.

Alert results are communicated to the ordering healthcare provider by telephone between 8:00 a.m. and 8:00 p.m., 7 days a week, including statutory holidays. If the ordering healthcare provider's office hours, clinic, nursing home, or hospital are known to extend beyond 8:00 p.m., alert results will be communicated up to the time specified in the client profile.

>>> A first attempt will be made to contact the ordering healthcare provider by telephone. If the initial attempt is unsuccessful, LifeLabs will fax the report to the ordering provider, and no further contact attempts will be made.

For healthcare providers who receive laboratory results electronically or directly through a clinical management system, LifeLabs can, upon receipt of written authorization, discontinue telephone notification of alert results and communicate these results electronically instead.

Once the request has been processed, LifeLabs will no longer call alert results, and the healthcare provider assumes responsibility for receiving, reviewing, and taking appropriate action based on these results.

RECURRENT CRITICAL AND ALERT RESULTS

Certain critical and alert results may occur repeatedly and are considered expected based on the patient's clinical history. These results are identified with an asterisk (*) in the charts below.

When these marked results recur within a four-month period, they will not be communicated by telephone outside of regular office hours. Instead, the results will be communicated by fax.

Exceptions to the Recurrent Result Rule:

Hemoglobin

When a critical or alert hemoglobin value has fallen by 10 g/L or more from the previous critical result, it will be appropriately communicated, even if recurrent with 4 months.

Platelet Counts

Platelet counts of $10 \times 10^9/L$ or less will be communicated as critical values even when recurrent, unless written instructions to the contrary have been received from the Specialist and approved by the Laboratory Director.

Urinalysis Critical Glucose Plus Ketones

- i. When blood glucose analysis is requested simultaneously with urinalysis in a known adult diabetic (documented by previous diabetic glucose values or Hb A₁C measurements), the glucose values in blood will take precedence and the critical or alert protocol for glucose will apply.
- ii. The combination of glucose $>55 \text{ mmol/L}$ **and** ketones $\geq 2 \text{ mmol/L}$ in any child (less than

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12 years old) or these same results in adults or adolescents (12 – 18 years old) with no previous documentation of diabetes mellitus at the reporting laboratory, will be communicated as critical, even if recurrent within 4 months.

- iii. Urine glucose >55 mmol/L **and** ketones $\geq$ 2 mmol/L in adults or adolescents (12 – 18 years old) who are clearly diabetic based on available laboratory data, but without accompanying (same requisition) serum glucose results, will not be considered critical result.

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CHEMISTRY		
	ALERT VALUES <i>called between 8:00 a.m. and 08:00 p.m. only</i>	CRITICAL VALUES 24 hours/day
Amylase*	* <1 year: Greater than 162 U/L * >1 year: Greater than 330 U/L	* <1 year: Greater than 540 U/L * >1 year: Greater than 1100 U/L
Calcium		Less than 1.65 mmol/L Greater than 3.25 mmol/L
Calcium Ionized		Less than 0.80 mmol/L Greater than 1.60 mmol/L
Carbon Dioxide (CO ₂)		Less than 10 mmol/L Greater than 40 mmol/L
Cholinesterase, Serum		Less than 1100 U/L
Cholinesterase, Plasma		Less than 1300 U/L
Cholinesterase, RBC		Less than 2650 U/L (Calculated)
CK-MB		CK-MB Index greater than 3.0%
Creatinine*	*Greater than 650 mmol/L	
Ethyl Alcohol	Greater than 33 mmol/L	
Glucose	Adults/Adolescents (12-18 years): Greater than 20.0 mmol/L	Children (<12 years): Less than 2.0 mmol/L Greater than 20.0 mmol/L Adults/Adolescents (12-18 years): Greater than 30mmol/L
Urinalysis Glucose + Ketone combination (blood glucose takes precedence for adult diabetics)		Adults/Adolescents (12-18 years) not known to be diabetic and Children (<12 years): Glucose > 55 mmol/L and Ketone > 2.0 mmol/L
Iron	Greater than 55 mmol/L (if age <10 years)	
Lead	Greater than 3.00 mmol/L	
Lipase*	*Greater than 177 U/L	*Greater than 590 U/L
Magnesium*	*Less than 0.40 mmol/L	
Potassium	Less than 2.8 mmol/L Greater than 6.2 mmol/L (regardless of the comment attached)	Less than 2.5 mmol/L Greater than 6.6 mmol/L (regardless of the comment attached)
Sodium		Less than 120 mmol/L Greater than 160 mmol/L
Total Bilirubin		0-2 days: Greater than 260 mmol/L 3 days: Greater than 310 mmol/L 4 - 28 days: Greater than 340 mmol/L
Urea*	*Greater than 35.0 mmol/L	

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THERAPEUTIC DRUG LEVELS		
	ALERT VALUES called between 8:00 a.m. and 08:00 p.m. only	CRITICAL VALUES 24 hrs/day
Carbamazepine		Greater than 63 mmol/L
Digoxin		Greater than 3.5 nmol/L (if time of last dose is > 6 hours)
Ethosuximide		Greater than 1000 mmol/L
Gentamicin		Greater than 2.0 mg/L (> 8 hours post dose)
Lithium	Greater than 2.0 mmol/L	Greater than 2.5 mmol/L
Phenobarbital		Greater than 250 mmol/L
Phenytoin		Greater than 130 mmol/L
Primidone	Greater than 70 mmol/L (reflex to Phenobarbital if Primidone > 70)	Greater than 110 mmol/L (reflex to Phenobarbital if Primidone > 70)
Rapamycin (Sirolimus)	Greater than 25.0 ug/L	Greater than 30.0 ug/L
Salicylate	Greater than 2.2 mmol/L	Greater than 3.0 mmol/L
Theophylline	Greater than 110 mmol/L	Greater than 220 mmol/L
Tobramycin		Greater than 2.0 mg/L (> 8 hours post dose)
Valproic Acid	Greater than 1000 mmol/L	Greater than 1400 mmol/L

HEMATOLOGY		
	ALERT VALUES called between 8:00 a.m. and 08:00 p.m. only	CRITICAL VALUES 24hrs/day
>>> Absolute Blast Count	Greater than 0 x 10 ⁹ /L	
>>> Absolute Lymphocyte Count		Greater than 250x10 ⁹ /L
Absolute Neutrophil Count*	Less than 0.7 x 10 ⁹ /L (ages 0 – 11 months) Less than 1.0 x 10 ⁹ /L (ages 1+) Greater than 50.0 x 10 ⁹ /L	Less than 0.5 x 10 ⁹ /L Greater than 100 x 10 ⁹ /L
Hemoglobin*	Less than 80 g/L Greater than 200 g/L (> 31 days old)	*Less than 60 g/L
Platelet Count*	Less than 50 x 10 ⁹ /L	*Less than 20 x 10 ⁹ /L
Prothrombin Time/INR	>4.5	Greater than 6.0
>>> Thromboplastin Time, Activated Partial (APTT)	Greater than 80 seconds	Greater than 100 seconds
BLOOD FILM REVIEW CRITERIA		
		All positive Malaria Smears Presence of intracellular bacteria in WBC

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MICROBIOLOGY		
	ALERT VALUES <i>called between 8:00a.m. and 8:00p.m. only</i>	CRITICAL VALUES <i>24 hrs/day</i>
Sterile Site Specimens (including CSF): Any Positive Gram Stain and/or culture Note: Only the preliminary positive result will be communicated as critical		*
Blood Cultures: Any positive gram stain results only Note: Only the preliminary positive result will be communicated as critical		*
Enteric Specimens: Vibrio cholerae		*
>>> Shigella spp	*	
>>> Salmonella enterica ser. Typhi and ser. Paratyphi A-C	*	
E. coli O157:H7	*	
>>> Enteric Specimens from < 5 years of age AND >65 years All Salmonella serovars, including non-Typhi and non-Paratyphi	*	
Yersinia enterocolitica, Yersinia pseudotuberculosis	*	
Wound Swabs: Group A Streptococcus	*	
Ocular Specimens: Culture positive for Neisseria gonorrhoeae, Neisseria meningitides, Pseudomonas aeruginosa, Bacillus cereus, Moraxella lacunata		*
Specimens positive for Dimorphic Fungi e.g. Blastomyces, Histoplasma, Coccidioides	*	
First time isolates or isolates >6 months after previous isolation: VRE, MRSA, C. auris and CPE from clinically infected sites, but not from screen sites	*	
Highly aggressive organisms or positive results for recognized agents of bioterrorism e.g. Bacillus anthracis, Brucella spp, Yersinia pestis, Francisella tularensis, Burkholderia mallei, Burkholderia pseudomallei, presumptive Clostridium botulinum		*
Any specimen positive for uncommon or unusual organisms that may portend an adverse clinical outcome e.g. Corynebacterium diphtheriae		*
>>> Molecular testing (Genital source) • Neisseria gonorrhoeae • Chlamydia trachomatis	*	

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	ALERT VALUES <i>called between 8:00a.m. and 8:00p.m. only</i>	CRITICAL VALUES <i>24 hrs/day</i>
Genital Culture Neisseria gonorrhoeae	*	
Specimens positive for Clostridioides difficile from HOSPITAL patients		*

Note: When a preliminary report which is considered critical is successfully communicated by the laboratory, further preliminary and the final microbiology report will not be communicated as a second critical value.