# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## LIST OF TESTS HANDLED ON AN URGENT BASIS

The following list of tests is available on an urgent basis from LifeLabs. Depending on geography and weather conditions, results will be available with a period of 6 to greater than 12 hours.

| | |
|---|---|
| **AMYLASE** | **LIPASE** |
| **NEONATAL BILIRUBIN** | **MALARIA SMEAR** |
| **CALCIUM** | **POTASSIUM** |
| **CHLORIDE** | **PROTHROMBIN TIME/INR** |
| **CREATININE** | **SODIUM** |
| **ESTRADIOL (IVF only)** | **UREA** |
| **GLUCOSE** | **CBC** |

It is important that office staff understand that ordering a test as urgent may result in an attempt to report during the night.

**Please note**: when an inappropriate “URGENT” order sample is received (either as a HCP-collected or patient presenting at a PSC), the test will automatically be downgraded to “ASAP” status.

The HCP must contact the Laboratory Director or the Medical Director on call through the Customer Care Centre at 1-877-404-0637 to have a non-available URGENT test performed on an URGENT basis. It may not be possible to comply with the request, depending on the nature of the test required.

## ASAP (AS SOON AS POSSIBLE)

You may request a special communication of test results as soon as these are available. This request will result in delivery of results to you at the first opportunity during your normal office hours. Autofax is the preferred modality of delivery.

Turn around time will depend upon the type of assay requested; however routine tests will be communicated in less than 24 hours. To ensure prompt communication, contact numbers must be provided. If these are not available the results will be reported in a routine fashion unless the results are alert or critical values.

# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## 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 can not be honored by LifeLabs.

### CRITICAL VALUE

A critical value is identified as a result that will cause the patient to suffer a life-threatening event if not communicated and treated immediately. These results show marked deviation from reference ranges suggesting that, if unexpected, a patient's life is in danger and prompt medical action may be required. These must be called as soon as results are available 24 hours per day.

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.

# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## REPORTING OF CRITICAL & ALERT VALUES (CONT'D)

### ALERT VALUE

An alert value is identified as a result that deviates significantly from the reference range and if unexpected, suggests the need to re-evaluate the clinical situation prior to the arrival of a report by routine channels. These results are called between 08:00 and 20:00 hours 7 days a week including statutory holidays.

For offices that receive laboratory results from LifeLabs electronically or directly to a clinical management system, they may provide direction in writing to LifeLabs to communicate all alert results in this manner. Once your request has been received and processed, LifeLabs will discontinued the calling of all alert levels results to you as you will be assuming the responsibility for receiving these results and taking the appropriate action.

### RECURRENT CRITICAL AND ALERT RESULTS

Experience shows that certain critical and alert results are frequently recurrent and the recurrence is not unexpected. *The critical and alert values marked with an asterisk * will **not** be communicated outside of normal office hours when the result is recurrent within a period of four months*. Such results may 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 x $10^9$/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 $A_1C$ 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 mmol/L ***and*** ketones $\geq$2 mmol/L in any child (less than 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 mmo/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.

# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## REPORTING OF CRITICAL & ALERT VALUES (CONT'D)

| CHEMISTRY | | |
|---|---|---|
| | **ALERT VALUES** ***to be called between 08:00 a.m. and 08:00 p.m. only*** | **CRITICAL VALUES** ***24 hrs/day*** |
| Chemistry | **Levels** | |
| Amylase* | *< 1 year: Greater than 162 U/L<br>*≥ 1 year: Greater than 330 U/L | *< 1 year: Greater than 540 U/L<br>*≥ 1 year: Greater than 1100 U/L |
| Calcium | | *Less than 1.65 mmol/L<br>*Greater than 3.25 mmol/L |
| Calcium Ionized | | Less than 0.80 mmol/L<br>Greater than 1.60 mmol/L |
| Carbon Dioxide ($CO_2$) | | Less than 10 mmol/L<br>Greater than 40 mmol/L |
| Carboxyhemoglobin | Greater than 0.35 | Greater than 0.50 |
| Cholinesterase, Serum | | Less than 1250 U/L |
| Cholinesterase, Plasma | | Less than 850 U/L |
| Cholinesterase, RBC | | Less than 3850 U/L |
| CK-MB | | CK-MB Index greater than 3.0% |
| Creatinine* | *Greater than 650 μmol/L | |
| Ethyl Alcohol | Greater than 33 mmol/L | |
| Glucose | Adults/Adolescents (12-18 years):<br>Greater than 20.0 mmol/L | Children (<12 years):<br>Less than 2.0 mmol/L<br>Greater than 20.0 mmol/L<br>Adults/Adolescents (12-18 years):<br>Greater than 30.0 mmol/L |
| Urinalysis<br>Glucose + Ketone combination<br>(blood glucose takes precedence for adult and adolescents only) | | Adults/Adolescents (12-18 years) not known to be diabetic and<br>Children (<12 years):<br>Glucose >55 mmol/L ***and***<br>Ketone ≥ 2.0 mmol/L |
| Iron | Greater than 55 μmol/L<br>(if age <10 years) | |
| Lead | Greater than 3.00 μmol/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<br>Greater than 6.2 mmol/L (non-hemolyzed) | Less than 2.5 mmol/L<br>Greater than 6.6 mmol/L (non-hemolyzed) |

# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## REPORTING OF CRITICAL & ALERT VALUES (CONT'D)

| CHEMISTRY – CON'T | | |
|---|---|---|
| | **ALERT VALUES** *to be called between 08:00 a.m. and 08:00 p.m. only* | **CRITICAL VALUES** *24 hrs/day* |
| Sodium | | Less than 120 mmol/L<br>Greater than 160 mmol/L |
| Total Bilirubin | | 0-2 days Greater than 260 μmol/L<br>3 days Greater than 310 μmol/L<br>4 - 28 days Greater than 340 μmol/L |
| Urea* | *Greater than 35.0 mmol/L | |

| THERAPEUTIC DRUG LEVELS | | |
|---|---|---|
| | **ALERT VALUES** *to be called between 08:00 a.m. and 08:00 p.m. only* | **CRITICAL VALUES** *24 hrs/day* |
| Carbamazepine | | Greater than 63 μmol/L |
| Digoxin | | Greater than 3.5 nmol/L (if time of last dose is ≥ 6 hours) |
| Ethosuximide | | Greater than 1000 μmol/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 μmol/L |
| Phenytoin | | Greater than 130 μmol/L |
| Primidone | Greater than 70 μmol/L (reflex to Phenobarbital if Primidone > 70) | Greater than 110 μmol/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 μmol/L | Greater than 220 μmol/L |
| Tobramycin | | Greater than 2.0 mg/L (> 8 hours post dose) |
| Valproic Acid | Greater than 1000 μmol/L | Greater than 1400 μmol/L |

# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## REPORTING OF CRITICAL & ALERT VALUES (CONT'D)

| HEMATOLOGY | | |
|---|---|---|
| | **ALERT VALUES** ***to be called between 08:00 a.m. and 08:00 p.m. only*** | **CRITICAL VALUES** ***24 hrs/day*** |
| **Absolute Lymphocyte Count** | | Greater than 250 x $10^9$/L |
| **Absolute Neutrophil Count*** | *Less than 1.0 x $10^9$/L<br>*Greater than 50.0 x $10^9$/L | *Less than 0.5 x $10^9$/L<br>*Greater than 100 x $10^9$/L |
| **Hemoglobin*** | *Less than 80 g/L<br>*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** | Greater than 4.5 | Greater than 6.0 |
| **Thromboplastin Time, Partial (PTT)** | Greater than 80 seconds | Greater than 100 seconds |

| BLOOD FILM REVIEW CRITERIA | | |
|---|---|---|
| | | All positive Malaria Smears<br>Presence of intracellular bacteria in WBC |

# EXPEDITED REQUESTS AND CRITICAL & ALERT VALUES

## REPORTING OF CRITICAL & ALERT VALUES (CONT'D)

**MICROBIOLOGY**

| | ALERT VALUES *to be called between 08:00 a.m. and 08:00 p.m. only* | CRITICAL VALUES *24 hrs/day* |
|---|---|---|
| **Sterile Site Specimens (including CSF):**<br>Any Positive Gram Stain and/or culture<br>Note: Only the preliminary positive result will be communicated as critical | | * |
| **Blood Cultures:**<br>Any positive culture gram stain only<br>Note: Only the preliminary positive result will be communicated as critical | | * |
| **Enteric Specimens:**<br>*Vibrio cholerae, Shigella dysenteriae typeI, Salmonella typhi, Salmonella paratyphi A and B* | | * |
| **Enteric Specimens:**<br>*E.coli O157:H7* on all patients | * | |
| **Enteric Specimens in Stool/Rectal Specimens from children less than 5 years of age AND the elderly (>65 years)**<br>All *Shigella* species including "non-dysenteriae" species; All *Salmonella serovars including non- typhi and non-paratyphi, Yersinia enterocolitica, Yersinia pseudotuberculosis* | * | |
| **Throat Culture**<br>Group A *Streptococcus* | * | |
| **Wound Swabs:**<br>Group A *Streptococcus* | * | |
| **Ocular Specimens:**<br>Culture positive for *Neisseria gonorrhoeae, Neisseria meningitides, Pseudomonas aeruginosa, Bacillus cereus, Moraxella lacunata***<br>****Note**: If *Moraxella* species (not *M.catarrhalis*) or *Bacillus* species (not *anthracis*) has been isolated in an ocular specimen, release a preliminary report with ALERT priority code. If *Moraxella lacunata* or *Bacillus cereus* has been confirmed by PHOL update the reporting criteria to CRIT | | * |
| **Specimens positive for Dimorphic Fungi**<br>e.g. *Blastomyces, Histoplasma, Coccidiodes* | * | |
| **First time isolates:**<br>VRE and MRSA from **clinically** infected sites, but not from screen sites | * | |
| **Highly aggressive organisms or positive results for recognized agents of bioterrorism**<br>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**<br>e.g. *Corynebacterium diptheriae* | | * |
| **Urethral Specimens (male):**<br>Gram-negative diplococci on Gram Stain | * | |

***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.*