

TITLE: Recording, Reporting, and Communication of Test Results (Routine, Alert and Stat Values)

NUMBER: 755.404.19

Page 1 of 7

POLICY: By the direction of the Medical Executive Committee, the Laboratory will report all alert values to the nursing unit or physician as required. The Laboratory staff will document whenever results are called.

PROCEDURE:

STAT Results

- 1) All stat results on inpatients are expedited upon verification via computer to the nursing units. These results are also available through Physician Portal and Healthbridge.
- 2) All laboratory samples from the Operating Suite are to be performed STAT and called to the operating room.
- 3) All STAT results on outpatients are called to the ordering physician and documented as a footnote/comment on the patient record including the caller's initials, date and time called, and the initials of the person receiving the report.
- 4) If there is a problem i.e., instrument down, the ordering unit will be notified or on outpatient the ordering physician or long term care facility will be notified.

Alert Values

- 1) TJC (The Joint Commission) requires a read-back on all alert values called and it must be documented with the call information.
- 2) The laboratorian must call an alert value on an inpatient or ED patient to the patient's nurse or designee within 15 minutes of test verification/available, stressing that the physician should be notified. This call is documented on the patient record including the caller's initials, date and time called and initials of the person receiving the report and the read back information.
- 3) Ft Thomas and Florence reference lab, Tristate, contacts nursing units directly and documents the call and read back.

Date of Issue: 3/2/87

Approved by: Katherine L. Reeves, M.T.(ASCP)

Approved by: Jackson O. Pemberton, M.D.
James J. Devitt, M.D.

Authorized by: Gary Blank, V.P

Revision Effective Date: 7/09

- 4) The laboratorian must call an alert value on an outpatient to the ordering physician. This call is documented on the patient record including the caller's initials, date and time called, and the name of the physician/or designate called and the read back information. When an alert value is reported to the laboratory by a Reference Lab, the laboratorian will call this value to the unit if it is an inpatient or to the physician if it is an outpatient.
- 5) If the ordering physician is not available or does not call the Laboratory within 60 minutes, then the technologist will contact the pathologist on call.
- 6) Alert values will not be called to physicians' voice mail boxes, since there is no way for the laboratorian to determine when the physician becomes aware of the alert value or for the results to be read back. If the physician is listed with Perfect Serve you should use the "One to One" number to contact them.
- 7) Repeated alert values that become more critical or do not change need to be called, documented, and brought to the attention of the supervisor or pathologist.
- 8) If the Laboratory computer system is not operational, all alert and stat results are called and documented on the temporary reports. The results are entered into the computer when it becomes operational.
- 9) To report alert values after normal business hours for all clinics, contact the Laboratory front staff for clinic phone numbers.

ALL ALERT VALUE RESULTS MUST BE CALLED - with the following exceptions:

- 1) Cancer Care patients - refer to departmental listings.
- 2) Patients in the critical care units (MIC, SIC & TCU) who have repeat alert values that are improving.
- 3) Alert value BUN and creatinine results from Dialysis patients do not need to be called to Dialysis.

ALERT VALUES

An alert value is an abnormal result, which may reflect a serious health problem or life-threatening situation. Once these values are verified in the Laboratory, the results are called to the nursing unit or physician as indicated. They are used as informational data only and not to dictate treatment of any kind.

Edgewood, Covington, and Grant County:

TEST	LOW VALUE	HIGH VALUE
Acetaminophen		> 70 ug/ml
Alcohol		> 300 mg/dl
Ammonia (children)		> 100 umol/L
BUN		> 75 mg/dl
Calcium	< 6.0 mg/dl	> 13.0 mg/dl
Digoxin		> 2.1 ng/ml
Dilantin		> 40 ug/ml
Fibrinogen	< 100 mg/dl	
Fibrin Split Products		> 40 ug/ml
Glucose - adults	< 40 mg/dl	>700 mg/dl
- children	< 30 mg/dl	> 300 mg/dl
Hemoglobin		
- adults	< 7.0 g/dL	>20.0 g/dL
- infants	< 10.0 g/dL	> 22.0 g/dL
Hematocrit		
-adults	<21%	>60%
-infants	<30%	>65%
INR		> 4.5
Lithium		>2.0 m Eq/l
Magnesium	< 1.1 mg/dL	> 5.0 mg/dL
pCO ₂ (arterial)	< 20 mm Hg	> 70 mm Hg
pH	< 7.2	> 7.6
pO ₂	< 40 mm Hg arterially	
Phenobarb		> 60 ug/ml
Phosphorus	< 1 mg/dl	
Platelet Count	< 50 X 10 ³ ul	>1,000 X 10 ³ ul
Potassium		
Adult	< 3.0 mEq/L (non hemolyzed)	>6.5 mEq/L (non hemolyzed)
Newborn		> 8.0 mEq/L
PTT (Partial Thromboplastin)		> 110 seconds

TEST	LOW VALUE	HIGH VALUE
Salicylate		>40 mg/dl (adult)
Sodium	< 120 mEq/L	> 160 mEq/L
Tegretol (Carbamazepine)		> 20.0 ug/ml
Theophylline		> 25 ug/ml
Valproic Acid (Depakene)		> 150 ug/ml
Vancomycin		Peak or Random ≥80 ug/ml Trough ≥20 ug/ml
WBC	< 2.0 X 10 ³ ul	> 100 X 10 ³ ul
GRAN	< 1.0 X 10 ³ ul	> 50 X 10 ³ ul

Any positive bacterial growth from blood cultures, spinal fluid, or sterile fluids will be called immediately. Positive AFB smears and/or culture results will be called immediately.

Ft. Thomas & Florence:

TEST	LOW VALUE	HIGH VALUE
Acetaminophen		> 100 ug/ml
Alcohol		> 270 mg/dl
Ammonia (children)		≥150 ug/dL
Bilirubin, Total		≥16 mg/dl Newborn 0-2 years
BUN		≥ 100 mg/dl
Calcium	< 6.7 mg/dl	≥13.2 mg/dl
Calcium, Ionized	<3.3 mg/dl	>6.2 mg/dl
Calcium, Ionized-Dialysis port	<1.0 mg/dl	>1.8 mg/dl
Carboxy Hemoglobin		>20%
CO ₂ , Total	<10 mmol/L	>40mmol/L
DAT		Positive -Newborn
Digoxin		> 2.5 ng/ml
Dilantin		> 30 ug/ml
Fibrinogen	< 100 mg/dl	
Fibrin Split Products		
Gentamicin Trough		>2.5 ug/ml
Glucose - adults	< 50 mg/dl	>500 mg/dl
- 0-30 days	< 40 mg/dl	> 300 mg/dl
Hemoglobin		
- adults	< 6.0 g/dL	>20.0 g/dL
- infants	< 10.0 g/dL	> 25.0 g/dL
Hematocrit		
-adults	<18%	>60%
-infants	<30%	>70%
INR		> 4.5
Lithium		≥1.5 m Eq/l
Magnesium	< 0.9 mg/dL	> 4.9 mg/dL
Neutrophils, Absolute	<1000/ul (age 0-30 days)	

TEST	LOW VALUE	HIGH VALUE
pCO ₂ (arterial)	< 16 mm Hg	> 70 mm Hg
pH	< 7.2	> 7.60
pO ₂	< 40 mm Hg arterially	
Phenobarb		> 70 ug/ml
Phosphorus	< 1 mg/dl	
Platelet Count	< 50 X 10 ³ ul	>1,000 X 10 ³ ul
Potassium		
Adult	< 3.0 mEq/L (non hemolyzed)	>6.5 mmol/L
Newborn		> 7.5 mmol/L
Protime		>43.1 seconds
PTT (Partial Thromboplastin)		> 40 seconds
HPTT (heparin therapy PTT)		>175 seconds
Salicylate		≥ 400 mg/L
Sodium	< 120 mmol/L	> 160 mmol/L
Tegretol (Carbamazepine)		> 20.0 ug/ml
Theophylline		>10 ug/ml (0-6 months) >30 ug/ml (+6 months)
Tobramycin Trough		>2.5 mg/L
Valproic Acid (Depakene)		> 150 ug/ml
Vancomycin		Random ≥60 ug/ml Trough ≥25 ug/ml
WBC	< 2.0 X 10 ³ ul	> 30 X 10 ³ ul

Any positive bacterial growth from blood cultures, spinal fluid, or sterile fluids will be called immediately. Positive AFB smears and/or culture results will be called immediately. Positive Bacterial Antigen testing on CSF/Blood/Serum, positive blood & stool parasites will also be called.

Edgewood, Covington, and Grant County:

ABNORMAL PRE-OP RESULTS - These coagulation results will be called during 1st and 2nd shifts to the physician with the understanding that the result may not be life threatening, but may reflect an increased risk of bleeding to the patient if surgery is performed.

- abnormal bleeding time
- platelets < 100,000
- PT prolonged > 2 sec above Normal Range
- PTT prolonged > 5 sec above Normal Range

Edgewood, Covington, and Grant County:

URINE ALERT VALUES

- Infants (<1 yr. old) - Any positive glucose with positive ketones (alert value).
- Notify physician of positive clinitest with negative glucose (not an alert value).
- Any Patient - Glucose > 1000 mg
- Notify physician of protein >1000 mg% (random specimen), (not an alert value).
- Peritoneal Fluid - Neutrophil counts of >250/mm³ (based on total WBC count and percentage of neutrophils on the differential).

Recording, Reporting, and Communication

All sites:**BLOOD BANK**

See physician notification protocols within department procedures.

SURGICAL PATHOLOGY

All initial site diagnoses of malignancy will be called by the pathologist to the physician or physician's office within 24 hours or by the end of the next working day, if a weekend.

HIV RESULTS – All positive HIV results are called to the ordering physician.

ALERT TESTS – All results whether stat, routine, normal, or abnormal are called to the ordering physician for Intact PTH (Ft. Thomas), PTH Turbo (Edgewood) and Frozen sections (Ft. Thomas, Florence, Edgewood).

In-Patient Lab Reports

- 1) Clinical laboratory and Cytology results are available for review in the CRT or on the printer at each Nursing unit.
- 2) All STATS are automatically expedited to each unit as the results are verified. Stat results are NOT called to the units.
- 3) A Covington, Edgewood, or Grant patient "Cumulative Summary" is sent to each Nursing unit on a daily basis. These are sent on yellow paper so they can easily be exchanged from day to day. Ft. Thomas and Florence unit's "Cumulative Summary" are white paper copies.
- 4) A Covington, Edgewood, or Grant patient "Interim Final" is sent on patients whose Cum Sums are older than 7 days or greater than 25 pages. They are white because they remain on the chart until the patient's discharge. At Ft. Thomas and Florence unit's, "Permanent" is on white paper. Nursing Hi-Lites in pink "Permanent" so the report is identified as do not discard.
- 5) At Covington, Edgewood, and Grant the Cum Sums and Interim Finals are discarded on discharge. A final copy is sent to Medical Records (HPF) through a cold feed. At Ft. Thomas and Florence units the "Discharge" reports print in lab and are sent to Medical Records for charting.

Anatomic Pathology Reports

Reports are sent to the units as "final copies" to be placed on the chart of inpatients.

Reference Lab Results

Covington, Edgewood, Grant:

Interfaced Reference Lab tests will be located on the SEMC chart under Reference Lab Results. Non-interfaced test will have a separate lab report from the reference lab that will be sent to the unit for charting. It will indicate what laboratory performed the procedure. This is the "final copy" of the reference lab report.

Ft. Thomas and Florence:

All testing is interfaced with LIS so no charting of reports is required.

Outpatient Reports

Outpatient lab reports printed daily are placed in the physician's folders in the evening and mailed by the mailroom, faxed, sent electronically or delivered by the courier depending on the physician's request. They are all final copies and are printed on white paper.

Electronic Report System

Covington – Edgewood – Grant

Several electronic systems are available from SEMC for reports. Lab reports are available through HealthBridge, Clinical Messaging, Horizon Portal, and the Mercury Data rounding tool. In addition, inpatient and outpatient reports are cold fed to Horizon Patient Folder.

Ft Thomas - Florence

Last Word, HealthBridge.

Infectious Disease Results

- 1.) St Elizabeth Medical Center Infection Control Department is responsible for the communication and documentation of infectious disease to the Kentucky Department of Public Health. Communication to the Infection Control Department includes in-house report programs, a data mining system (Premiere Safety Surviellor) and phone call (for non-interfaced reference laboratory testing). SOP's for in-house Infectious Diseases also include communication to Infection Control.
- 2) Testing performed at the reference lab may be interfaced through our LIS and results then feed directly to the in-patient chart or the outpatient record. If the test is not interfaced, the result can be entered through a secure connection, System 2000, which then prints a report to a dedicated printer in the laboratory. The resulting reports are sent to the in-patient medical record or the outpatient physician.
- 3) The reference lab reports to the State of Kentucky Department for Public Health all required results. A "state reporting test list" is available from the reference lab.
- 4) Reportable serological test results from the reference lab are captured in Premiere Safety Surviellor and also capture microbiology infectious disease testing.
- 5) Infection Control communicates as necessary any positive results to the Department of Public Health. Communication may be via KY-Electronic Disease Surveillance System or hard copy documentation/mailing.