Name of Policy: **STAT Tests Critical Tests and Critical Limits** **Policy Number**: 3364-107-107 **Approving Officer**: Medical Director, Clinical Pathology **Responsible Agent**: Director, Clinical Pathology Administrative Director, Lab **Scope**: Pathology-Laboratory University of Toledo Medical Center	UTOLEDO HEALTH **Effective date:** 01/28/2025 **Original effective date**: 9/4/1989
Key words: STAT, STAT priority, established turnaround times, critical values, documenting critical tests.	

☐	New policy proposal	☒	Minor/technical revision of existing policy
☐	Major revision of existing policy	☐	Reaffirmation of existing policy

(A) Policy statement

Each lab department has established STAT turnaround times for tests and critical limits for tests requiring verification and notification.

(B) Purpose of policy

To provide physician notification when test results indicate the need for prompt attention and patient care management.

(C) Procedure

1. STAT specimens must be delivered to the department immediately upon receipt and processing in the Central Lab office.
2. STAT tests take first priority over routine tests. Processing of STAT specimens must begin immediately. ED results should be reported within 30 - 60 minutes unless manual verification of test results is indicated. All other STAT orders should also be reported within 30 - 60 minutes unless manual verification of test results is indicated.
3. STAT results are called and/or electronically sent to the proper station immediately according to instruction. When significant delays are anticipated due to equipment, computer or staffing problems, the appropriate clinician must be notified, and the contact documented.

Turnaround times of tests ordered STAT:

CBC	30 minutes	Basic Metabolic Panel	30 minutes
Urinalysis	30 minutes	Troponin	60 minutes
Serum/Urine Pregnancy Test	30 minutes	PT/PTT	30 minutes
Type & Screen	40 minutes	Blood Type	15 minutes

Type & Cross			

Critical Limits/Results:

The following are designated critical limits when seen in a new patient or a patient with marked changes from previous results:

TEST	LESS THAN	GREATER THAN
Chemistry		
Glucose	50 mg/dL	400 mg/dL
Hepatitis A Ab (IgM)		Positive (initial inpatient only)
Hepatitis B Core Ab		Positive (initial inpatient only)
Hepatitis B Surface Ag		Confirmed Positive (initial inpatient only)
Hepatitis C Ab		Positive (initial inpatient only)
Magnesium	1.0 mg/dL	4.0 mg/dL
Potassium	3.0 mEq/L	5.9 mEq/L
Sodium	125 mEq/L (initial value)	155 mEq/L
Total CO2	15 mEq/L	40 mEq/L
Calcium	6.0 mg/dL	12.0 mg/dL
Total Bilirubin (outpatient)		12.0 mg/dL
TSH		>150 uIU/mL
Cardiac Markers		
Troponin I		0.1 ng/mL (initial value)
CKMB Index		1.9 if total CK is >200 (initial)
Therapeutic Drugs		
Acetaminophen		150 mcg/mL (4-hour post ingestion)
Digoxin		2.0 ng/mL
Phenytoin (Dilantin)		20 µg/mL
Phenytoin (Dilantin), Free		2.5µg/mL
Salicylic Acid (Aspirin)		30 mg/dL
Valproic Acid (Depakote)		150µg/mL
Vancomycin		80µg/mL
Vancomycin, Trough		20µg/mL
Other Chemistry		
Ammonia		99 umol/L (initial)
Lactate		2.5 mmol/L **(**initial)
Procalcitonin		1.99 ng/mL (initial)
Hematology		
WBC	2000	50,000
Hgb	Less than or equal to 6	
Platelets	20,000	
Coagulation		
Protime		≥50 secs

INR		≥5.0
APTT		≥130.0 secs (or the upper limit of the established APTT therapeutic range as determined by the Coagulation department at lot change)
UFH Heparin	≤0.16 IU/mL	≥0.90 IU/mL
LMWH Heparin	≤0.30 IU/mL	≥1.50 IU/mL
FSP		20 µg/mL
Fibrinogen	≤100mg/dL	
TCT		30 sec
D-Dimer		≥20 µg/mL FEU
Platelet Function Test		COL/EPI >300 sec ***AND*** COL/ADP > 300 sec

Differential counts that include blasts on undiagnosed patient or patient in remission.

Microbiology:

1. All STAT gram stains performed whether positive or not, must be called within one hour of receipt in laboratory.
2. Panic Values call as soon as identification or findings are documented.
   - **a.** Positive direct specimen gram stains from normally sterile body sites and fluids. (CSF, synovial, pleural, pericardial, thoracentesis)
   - b. Positive cultures from normally sterile body sites and fluids (Blood, CSF, synovial, pleural, surgical sites). For Blood Cultures, call the first positive bottle of each set collected (unless the gram stain shows a different organism), for the first two sets of the calendar date.
   - c. Positive anaerobic cultures from normally sterile body sites and fluids, even if aerobic bacterial growth has been called. Antibiotic treatment for mixed aerobic/anaerobic infections may not have been started.
   - d. All stools positive for enteric pathogens or parasites: Salmonella, Shigella, E coli O157:H7, Campylobacter, Yersinia, Giardia, and Cryptosporidium.
   - e. Positive Legionella or Pertussis
   - f. First Mycobacterial positive culture and/or smear.
   - g. Carbapenemase Resistant *Enterobacteriaceae* (CRE)
   - h. ESBL positive *Enterobacteriaceae*.
   - i. Multiply resistant *Enterobacter* species.
   - j. Multiply resistant *Acinetobacter* species.
   - *k.* Multiply resistant *Pseudomonas aeruginosa*
   - l. MRSA
   - m. Neisseria meningitidis isolates
     NOTE: For sputum isolates, notify Infection Control, if possible, before calling floor.
   - n. All Class A reportable infectious diseases: (Anthrax, Cholera, Yersinia pestis, Diphtheria, Botulism).
   - *o. Listeria*
   - *p. Brucella*
   - q. Vancomycin resistant *Staph aureus*
   - r. Vancomycin intermediate *Staph aureus*
   - s. Filamentous molds from respiratory cultures and normally sterile sites.
   - t. Positive Clostridium difficile antigen
   - u. VRE
   - v. Positive COVID-19

For all underlined panic values from inpatients, notify the Infection Control Department immediately so the infection control measures can be instituted. Document is LIS.

Critical Value Notification:

To notify physician:

- Outpatient - Call physician or RN in clinic for tests drawn in outpatient draw sites. If there is not an RN working at the clinic, the physician must be notified. If this is an outpatient that has a non UTMC physician, call the physician's office and ask to speak to an RN. If the office is closed or an RN is not available, the patient's physician or covering physician must be notified. At least 2 attempts are to be made to notify attending physician or covering physician via phone, pager, or hospital operator. If unable to locate physician or if no response is received, note failure to communicate result in laboratory computer system and fill out a laboratory occurrence report. Outpatient critical values should be called to the physician within 1 hour of critical result verification.
- In-patient and Emergency Department – Notification should be made to RN responsible for patient. If RN is unavailable notify Hospitalist or physician responsible for unit. Inpatient and Emergency Department critical results should be called to caregiver with 15 minutes of verification of critical result.
- For in-patient blood cultures, notify Antimicrobial Stewardship Pharmacist or Central Pharmacy if steward is unavailable.
- Note in "Test Comments" in the computer the time the results were checked and called and the name of the person receiving the report. Two patient identifiers and all results must be *read back* by the recipient to ensure accuracy and understanding.

Approved by: /s/ _____ Name: Amira Gohara, M.D. Title: Medical Director, Clinical Pathology 1/28/2025 _____ Date *Review/Revision Completed by:* *Joshua Otiso – Administrative Director - Lab*	**Policies Superseded by This Policy:** • *OP-07* Initial effective date: 9/4/1989 Review/Revision Date: 01/28/2025 Next review date: 01/28/2027