Clark Memorial
Hospital Laboratory

1220 Missouri Avenue
Jeffersonville, Indiana 47130

Laboratory Directory of Services

This is a printed copy of the online manual provided by Clark Memorial Hospital Laboratory to facilitate use of Laboratory Services. This manual is comprised of data extracted from various technical manuals in use throughout the Laboratory, from reference laboratories, and from policies approved by the Laboratory Medical Director.

The Laboratory participates in internal Quality Improvement programs both intra-departmentally and interdepartmentally. The Laboratory performs quality monitors on contracted services and participates in user surveys. The Laboratory maintains at least annual competencies on all personnel and provides guidance and review of quality control for Point-of-Care Testing performed in Nursing Services.

Reviewed and Approved by

Kelly Z. Brown, MD
Laboratory Medical Director
02/27/2014

Edited and Compiled by:

Dave Cooper MT (ASCP), SH
Laboratory Information System
02/27/2014

Approval Signatures on file in Lab

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AREA: Laboratory	
DEPARTMENT: Lab DOS Manual	WRITTEN BY Dave Cooper MT(ASCP)SH
Original effective date 01/01/2014	APPROVED BY / EFFECTIVE DATE: Kelly Z. Brown, MD Laboratory Medical Director (signature on file)
Procedure Manual review by Medical Director or designee is documented on the ñREVIEW OF PROCEDURESò page at the front of the manual.	

LABORATORY SCOPE OF SERVICES

Location

The Clinical Laboratory and Pathology Department are located on the Lower Level of Clark Memorial Hospital in the Outpatient Building. The Outpatient Laboratory Collection site is located on the first floor of the Outpatient Building.

Accreditation

The Department is accredited by the College of American Pathologists (CAP), which has deemed status under the Clinical Laboratory Improvement Act (CLIA). The Laboratory participates in the CAP Survey Program. Laboratory has an on-going Quality Plan, is represented on the hospital Pillar Committee (formerly named the Quality Council) and participates in process improvement activities inter-departmentally and intra-departmentally. Accreditation numbers are as follows:

CAP Accreditation : #16941-01
CLIA Certificate : #15D0359333

Customer Service Phone Numbers:

Outpatient Services Phone Numbers

- Test Information
  (812) 283-2167 Monday ï Friday 6:00 AM ï 7:00 PM
  Saturday 6:00 AM ï 2:30 PM
- Billing questions
  (812) 283-2634 Monday ï Friday 7:00 AM ï 4:30 PM

Inpatient Services Phone Numbers

- Scheduling*
  (812) 283-2167 Monday ï Friday 7:00 AM ï 4:30 PM
  **(special procedures, inpatients only)*
- Routine Test Information
  (812) 283-2167, Monday - Friday 7:00 AM ï 5:30 PM,
  Saturday- Sunday 6:30 AM ï 3:00 PM

- Billing questions
  (812) 283-2634 Monday ï Friday 7:00 AM ï 4:30 PM

- Anatomic & Surgical
  Pathology / Cytology
  (812) 283-2167 Monday- Friday 7:00 AM - 5:30 PM

- After Hours Assistance
  (812) 283-2327 Monday ï Sunday 7:00 PM - 6:30 AM

- Emergency Assistance ï call Lab Charge Tech- Onsite
  (502) 836-6602 24 hrs/day 7 days per wk

- Lab Leader on Call
  (502) 718-2327 24 hrs/day 7 days per wk

- Physician Hotline (Physician concerns / issues) message line.
  (812) 283-2999 24 hrs/day

Hours of Operation

Inpatient and Emergency Room

The Clinical Laboratory is open for routine and emergency service to inpatients and emergency room patients twenty-four hours a day, seven days a week, including holidays.

Anatomic and Surgical Pathology and Cytology Offices are open Monday through Friday 7:00 AM ï 5:30 PM. Pathologists are available on call 24-hours per day, seven days a week for emergency services for consultation, including frozen sections.

Outpatient Collection
Outpatient services are available Monday through Friday from 5:30 to 19:00 and on Saturday from 6:30 to 14:30. Routine outpatient services are not normally available on Sunday or after hours. (Special arrangements may be possible in exceptional cases with sufficient advance notice.)

Referred Specimens from Outside Sources

The laboratory accepts specimens of all priorities from outside sources, 24 hours per day, seven days a week. This includes specimens from other facilities, physiciansô offices, and home health organizations.

Laboratory Component of Patient Assessment

Clinical laboratory diagnostic testing is provided on site at Clark Memorial Hospital Laboratory under the direction of the Medical Director. Appropriate diagnostic testing provided is integral to the physical, psychological and social assessment of the patient. Waived, moderate complexity and high complexity tests are performed within the Laboratory. Testing is performed only with a physician order.

Inpatient orders are entered by Nursing into the hospital information system (HIS). The Lab Information System receives the orders from the (HIS) through an interface. This happens in ñreal timeò. The priority assigned must match the physician order.

Outpatient orders are entered into the LIS by Laboratory staff after the patient has been admitted into the HIS. The minimum data that accompanies that patient computer testing record is shown below:

Minimum Patient Information

- Patient full name and location
- Patientôs Medical Record and Account Number
- Name of the test(s) being ordered
- Date and time for test to be performed
- Priority of test (STAT, URGENT, TIMED, or ROUTINE)
- Diagnosis code and/or signs and symptoms (supporting ñmedical necessity of testò criteria)
- Ordering Physician

Services Provided In-house are as follows:

Anatomical/ Surgical Pathology
- Histology
- Cytology
- Autopsy

Clinical Services Available
- Phlebotomy/Clerical
- Hematology
- Coagulation
- Urinalysis
- Serology
- Transfusion Service
- Microbiology
- Chemistry / Special Chemistry

Staffing

Medical Director

The Medical Director is licensed to practice medical in the State of Indiana and Commonwealth of Kentucky and is board certified. The pathologist or an associate pathologist is on call at all times. At least one full time pathologist is on duty during regular business hours.

Supervision

The Managers report to the Director. The Director and Managers are registered Medical Technologists certified through the American Society of Clinical Pathology or equivalent. The Director of Laboratory reports to the VP of Outpatient Services. The Managers report to the Director of Laboratory.

Staffing Is Based On The Following

- Department workload based on number of orders for laboratory tests and related procedures
  (This information is reflected in the data distributed with each pay cycle.).
- Complexity and technology of testing procedures
- Competency of assigned personnel needed to perform duties
- Supervisory requirements of assigned technical and support staff
- Relevant Environment of Care and Infection Control Issues
- Variations in workload volume are generally compensated for with PRN personnel for higher volumes and voluntary budget time (time without pay) or paid vacation time for periods of low volume.

Second shift is 14:30 ï 23:00. Third shift is 22:30 ï 07:00. Adequate staffing of technical and support staff is provided to maintain 24-hour service for inpatients and Emergency room patients.

Ordering Priorities

Tests are to be ordered in accordance with the priority on the physician order. The categories available are
Immediate orders and future orders. Within these categories are ***STAT, URGENT, TIMED, and ROUTINE.***

STAT - This means the test is needed at the highest priority (life and death situation could exists). Most tests that are available STAT and performed in-house, the test should be available within one hour or less.

URGENT - This means the test is needed at the SECOND highest priority after STAT. These tests are generally available within one hour or less for tests that are available STAT and performed in house. Delays would be experienced when there is a high volume of STATs taking precedence or when there are critical TIMED tests needing precedence.

TIMED - This means the test is needed at a specific time, such as to coordinate with administration of drugs or to coordinate with other procedures. If ñnot collectingò the specimen at the designated time would compromise patient care or validity of the test results, then this is truly a TIMED test. TIMED tests might take precedence over URGENT, depending on patient condition and the nature of the test being performed.

ROUTINE - This means GENERALLY that the test is needed within the same shift as ordered. Routines are generally available within two to four hours when performed in-house.

Obtaining Results

Results are available to the user on the HIS networked PC display and/or printers (or fax) in ñreal timeò as soon as the result is completed and verified by technical personnel. Outpatient results are available immediately by automatic faxing to the physiciansô offices. Results are not generally available by phone for confidentiality reasons.

Computer Downtime

When an HIS computer ñdowntimeò occurs, all lab tests are ordered on manual miscellaneous requisitions. Laboratory personnel transfer these orders into the LIS. The LIS has dual CPUs and has essentially no downtime. This allows results to continue to be generated through printouts and automatic faxing while the HIS is down. When the HIS is available again, all lab results automatically download into HIS. (Specifics of computer downtimes are addressed in the Computer Downtime Policies.)

Reference Laboratories

Some tests may be referred to CLIA-certified outside laboratories. Examples are some specialized, esoteric, or low volume tests. Physician input is given as to what laboratories will be used. The prime vender for reference labs is Quest Diagnostics. All reference lab results are reported on the patient chart on the original form of the reference lab performing the test, or scanned into SAC under the SCANNED DOCUMENTS section, unless interfaced with the LIS. Quality Assurance monitors are documented relative to these contracted services to assure that results are adequate, reliable and timely. This data is reported through the lab Quality Program. A list is maintained for all reference labs

utilized, with copies of their CLIA current CLIA certificates. This list is presented to the Medical Executive Committee for approval at least annually.

Point-of-Care Testing

- ***Glucose Meter Testing***
- ***Urine Dipstick***
- ***Urine HCG***
- ***Hemacue Glucose Testing***
- ***Hemoglobin A1C***
- ***Occult Blood – Point-of-Care***
- ***Hemastix Urine Dipstick***
- ***Avoximeter O2 Saturation***
- ***I-Stat Survey-8 (Basic Metabolic Profile) and its components***
- ***PH for Vaginal Secretions***
- ***Cholestech LDX Lipid Profile***
- ***I-Stat Troponin – Point-of-Care***
- ***I-Stat Activated Clotting Time***

No other Laboratory point of care testing is currently authorized within Clark Memorial Hospital. All persons wishing to implement new point-of-care testing must notify the Laboratory Director prior to initiating such procedures for approval by the Laboratory Medical Director. This is to assure adherence to the Clinical Laboratory Improvement Act (CLIA) and other regulatory requirements. This is includes initial formal training by and /or overseen by the laboratory point of care coordinator and then at least annual competencies thereafter.

Note: For detailed Information on Point of Care Testing (Waived) performed by Nursing Staff refer to Glucose Meter and Dipstick Procedures contained in the hospital Patient Care Manual. Quality Control is performed by those personnel doing the testing and reviewed by a designee of the Laboratory Medical Director. These tests are performed under the CLIA (Clinical Laboratory Improvement Act, Certificate of Waiver # 15D0677084).

Supervisory Points of Contact - 283-2167 Preferred Phone Number for all calls
All calls to Lab should be made to 283-2167 to have your call properly directed. The following listing is for referrals regarding technical questions or problems within the areas listed.

Office Coordinator	Brenda Edwards	(812) 283-2167	(6:30 am ï 3:00 pm)
Secretary	Ann Cain	(812) 283-2167	(9:00 am ï 5:30 pm)
Laboratory Manager Darlene Bell, MT (ASCP) Hematology, Microbiology		(812) 283-2861	(7:30 am ï 4:00 pm)

Laboratory Manager
Trevor Votteler MT(AMT) (812) 285-5872 (6:30am ï 3:00 pm)
Chemistry, Blood Bank, Quality, 3rd Shift

Laboratory Manager
Alec Alimorong, MT (ASCP) (812) 285-5873 (2:30 pm ï 11:00 pm)
2nd Shift Manager

Point of Care Tech (812) 285-5870 (8:00 am ï 4:30 pm)
Jean Tinsley MT(ASCP)

Lab Information Systems Administrator:
Dave Cooper, MT (ASCP) SH; CLS (812) 285-5867 (8:00 am ï 4:30 pm)
Lab Information Systems, Lab Safety Officer

Lab Administrative Director
Vannah McClure, MBA, MT (ASCP) (812) 283-2152

Panic Values

The Department of Pathology has designated certain clinical laboratory results as critical or ñ***PANIC VALUES".*** These are values that require immediate phone notification of the Nursing Unit or Physician. Lab personnel calling panic (critical) values will ask the person receiving the results to repeat and verify the results. The laboratory information system alerts personnel when one of these results is obtained. Documentation of the call becomes part of the permanent result record.

CLARK MEMORIAL HOSPITAL LABORATORY CRITICAL RESULTS

HEMATOLOGY/URINALYSIS

TEST	LOW LIMIT	HIGH LIMIT
WBC Count	1,000/ mm^3	50,000/ mm^3
Hemoglobin	8.0 mg/dL	20.0 mg/dL (not newborn)
Hematocrit	20%	60% (not newborn)
Platelet Count	30,000/mm^3	900,000/ mm^3
PT (screen)	-----	40 seconds
INR (on Coumadin)		4.7
APTT	-----	100 seconds
Fibrinogen	100 mg/dL	-----
Identification of Malaria (Initial Smear Only)		
Identification of Blasts (Initial Smear Only)		

CHEMISTRY

TEST	LOW LIMIT	HIGH LIMIT
Bilirubin (newborn only)	-----	15 mg/dL
Blood Gases		
pO_2	45 mmHg	-----
pCO_2	20 mmHg	70 mmHg
pH	7.20	7.59
BUN	-----	100 mg/dL
Calcium	6.0 mg/dL	13.0 mg/dL

CO_2	11 mmol/L	-----
Creatinine	-----	3.5 mg/dL (initial result only)
Glucose, Blood	50 mg/dL	500 mg/dL
Glucose, Cerebrospinal Fluid	30 mg/dL	-----
Magnesium	1.0 mg/dL	5.0 mg/dL
Phosphorus	1.0 mg/dL	8.0 mg/dL
Potassium	2.8 mmol/L	5.7 mmol/L
Sodium	118 mmol/L	160 mmol/L
Confirmed Positive HIV		

THERAPEUTIC DRUGS

DRUG	HIGH LIMIT
Acetaminophen	>100 mcg/mL
Amikacin	Trough > 10 mcg/mL
Carbamazepine	>12 mcg/mL
Dilantin (Phenytoin)	>30 mcg/mL
Digoxin	>2.1 ng/mL
Gentamicin	Trough > 2 mcg/mL, Peak > 10 mcg/mL
Lithium	>1.5 mEq/L
Phenobarbital	>40 mcg/mL
Salicylate	>30 mcg/mL
Theophylline	>20 mcg/mL
Tobramycin	Trough > 2 mcg/mL, Peak > 10 mcg/mL
Valproic Acid	>100 mcg/mL
Vancomycin	Trough > 15 mcg/mL, Peak > 40 mcg/mL

BLOOD BANK

Positive Antibody Screen (All Inpatients and Outpatients as needed)
All Transfusion Reaction Evaluations
Positive DAT (on all newborns)

REFERENCE LAB

All critical results called from reference lab.

NOTE: **For all departments, all STAT intraoperative results should be called to surgery.**

MICROBIOLOGY

Critical Results (called STAT 24/7, IP, OP, ED)

Positive Blood Culture
ANY positive CSF result
C. difficile test (NOT ED)
ANY positive sterile body fluid result (other than urine)
Group B Streptococcus (newborn only up to 1 month of age)
Positive AFB, culture or smear (1^{st} shift only)
Any agent of Bioterrorism
Positive Shiga Toxin/E coli 0157
Positive Listeria monocytogenes
Positive Group A Streptococcus from wound or fluid
OR (Operating Room) Gram Stains ordered STAT

Alert Results (resulted and called on 1st shift only for IP, faxed for OP/ discharged patients)

Any MDR (Multi-drug resistant organism, other than MRSA) including:
- VRE (Vancomycin Resistant Enterococcus)
- ESBL (Extended Spectrum Beta Lactamase)
- CRE (Carbapenem Resistant Enterobacteriaciae), formerly KPC
- XDR (extensively drug resistant)
- PDR (pan drug resistant) organism

VRSA/VISA (Vancomycin Resistant/Intermediate Staphylococcus aureus)
Group B Strep isolated from known pregnant women (LR, WCP ordered)
Rare, unusual, or significant isolates posted on the ñCommunicable Disease Reporting Ruleò

Alert Results (called on Inpatients 24/7, faxed for OP/discharged patients)

+ Influenzae A or B
+ RSV
+ Rotavirus
+ Legionella antigen
+ Enteric pathogen
+ Parasite including Giardia/Cryptosporidium antigen

Alert results are not called to the ED (per ED physicians request) as results are instantly monitored.

All of the above (and others) are reported to Infection Control daily M-F.

NOTE: **For all departments, all STAT intraoperative results should be called to surgery.**

Blood Bank

The Blood Bank at Clark Memorial Hospital Laboratory is a full service Blood Bank accredited by the College of American Pathologists. Services are available 24 hours per day, 7 days per week.

Available Testing
(*denotes investigational testing ordered within Blood Bank an essential part of compatibility testing)

Specimens for blood bank must be labeled with Patient name, Medical Record #, date and time of collection and collectors initials. Preferred specimen for all adult testing requires a 10 mL lavender top tube with no gel separator. *Note: A 15-mL red top tube with no gel separator may be used if necessary,*

ABO and RH Typing	Eluate
Antibody Screening	Prenatal Testing
Direct and Indirect Coombs	Crossmatch
Type and Screen	Antibody Identification
Fetal Screen	Antigen Typing
KB Stain	

Available Products
Red cells

1. Patient must be banded with Hollister Armband for positive identification safeguard
2. Must be crossmatched except in Emergency
3. Blood will be released within 72 hours if not transfused
4. Irradiated blood may be ordered from the Red Cross if the patient requires it.
5. All RBC products are leuko-reduced before shipment from the Red Cross.

Apheresis Platelets

1. Patient must be banded with Hollister Armband for positive identification safeguard.
2. Product is short-dated and must be ordered from American Red Cross.
3. All products are leukoreduced. Irradiation may be ordered if necessary.

Cryoprecipitate

1. Patient must be band with Hollister armband for positive identification safeguard.
2. Advance notification required. Product ordered from American Red Cross.

Fresh Frozen Plasma

1. Patient must be banded with a Hollister armband for positive identification safeguard.
2. Requires thirty-minute advance notice to allow thawing of product for transfusion.
3. Patient must have ABO and RH type during current stay prior to thawing of product.

Outpatient Transfusion Services

Contact Blood Bank, 283-2155 during normal business hours 24 hours in advance for Transfusion services for Outpatients. (Back up phone number is 283-2327). The 24-hour advance notice may be required to complete testing and obtain the appropriate transfusion product. Ambulatory Care must be contacted (283-2350) for appointments to transfuse.

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AREA: Laboratory	
DEPARTMENT: Lab DOS Manual	WRITTEN BY Dave Cooper MT(ASCP)SH
Original effective date 01/01/2014	APPROVED BY / EFFECTIVE DATE: Kelly Z. Brown, MD Laboratory Medical Director (signature on file)
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SECTION 2

Alphabetical List of Tests – CMH

(For tests that are commonly referred to outside labs, see Section 3.)

This section contains tests routinely performed at Clark Memorial Hospital Laboratory. The turn-around times listed are targets that are routinely met. It is anticipated that these targets will be met 90 plus percent of the time, under normal conditions.

CPT Codes
CPT codes listed in this Directory are provided only as guidance to assist you in billing. CPT codes listed reflect our interpretation of CPT coding requirements and are subject to change at any time. It is the client's responsibility to verify the accuracy of the codes and to assign values based on the reimbursement for your area. If you have any questions, please refer to the Current Procedural Terminology (CPT) manual published by the American Medical Association. For questions regarding reimbursement verification or CPT code usage, please contact your local Medicare carrier.

Specimen Processing:
Unless otherwise noted, all specimens for tests requiring serum or plasma need to be delivered to the laboratory and separated from the red blood cells ASAP. Please notify the laboratory before collection if any significant delay in processing is anticipated.

	ABO AND RH	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL plasma + 1 mL EDTA Whole Blood					
Tube / Container:	Prefer 10 mL Lavender top but can use 15 mL red top + 3 mL lavender top					
Setup Schedule:	All shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	86900, 86901					

	Acetaminophen, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL Serum					
Tube / Container:	Red top Tube,not SST					
Setup Schedule:	All shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	For urine, see reference lab list					
CPT4:	82003					

	Acetone, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL Serum					
Tube / Container:	Red top or Red/Gray SST					
Setup Schedule:	All shifts					
Turnaround Times:	For urine, see Ketones, urine	1	1	1-2	1-4	hrs
Comments:						
CPT4:	82009					

	Acid Fast Culture & Smear
	See Mircrobiology Collection - Section 4

	Albumin, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red or green top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1	1-4	hrs
Comments:						

CPT4: 82040

	Albumin, Body Fluid, Qt.	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL fluid					
Tube / Container:	sterile container or red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82040					

	Albumin, Urine, Qualitative	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL random urine					
Tube / Container:	urine container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	81003					

	Alcohol, Blood (Ethanol)	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Setup Schedule:	red top or gray fluoride tube					
Turnaround Times:	all shifts	1	1	1-2	1-4	hrs
Comments:	keep tube stoppered (Check patient care manual for legal draw)					
CPT4:	82055					

	Alkaline Phosphatase	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or SST tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84075					

	Alkaline Phos., Fractionated	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum or plasma					
Tube / Container:	red, green, sst					
Setup Schedule:	all shifts					
Turnaround Times:					1-4	hrs
Comments:						
CPT4:	84078					

	ALT (SGPT)	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	allshifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84460					

Amikacin, Peak

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.o mL serum				
Tube / Container:	red, not sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Draw one hour after infusion starts - Timing is critical.				
CPT4:	80150				

Amikacin, Random

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum				
Tube / Container:	red, not sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Note time of medication				
CPT4:	80150				

Amikacin, Trough

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum				
Tube / Container:	red, no sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Draw 30 minutes prior to next dose Timing is critical				
CPT4:	80150				

Ammonia, Blood

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL whole blood				
Tube / Container:	green				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Keep stoppered, on ice, run within twenty minutes				
CPT4:	82140				

Amoeba, Stool Smear

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Fresh stool, less than 1 hr old				
Tube / Container:	stool container				
Setup Schedule:	Usually first shift				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	See Mircrobiology Collection - Section 4				
CPT4:					

Amylase, Fluid (Not Urine)

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL fluid				
Tube / Container:	misc container				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Specify Source of Fluid				

CPT4: 82150

Amylase, Serum

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum				
Tube / Container:	red top or sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	82150				

Amylase, Urine

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Timed urine collection, specify				
Tube / Container:	24-hr urine, or other container				
Setup Schedule:	Mon-Sun First Shift				
Turnaround Times:	24-hr urine turnaround=			1	day
	2-hr 1	1-2	1-2	2-8	hrs
Comments:					
CPT4:	82150				

ANA

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL serum				
Tube / Container:	red top				
Setup Schedule:	First shift only, M-F batched				
Turnaround Times:				2-3	days
Comments:	All positive tests are titered				
CPT4:	86038				

Antibody Identification

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	10 mL				
Tube / Container:	lavendar top				
Setup Schedule:	Mon-Sun; All shifts				
Turnaround Times:	1	1	1-2	1-2	hrs
Comments:	All positive tests are titered				
CPT4:	86870				

Anti Syphilis IgG

Specimen Req.:	0.5-l mL serum				
Tube / Container:	red top				
Setup Schedule:	M-W-F				
Turnaround Times:				24-72	hrs
Comments:					
CPT4:	86592				

Antithrombin III

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL citrated plasma				
Tube / Container:	blue top only on ice				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	expedite to lab with 30 minutes				
CPT4:	85300				

	APT Test	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL gastric or small amount of stool					
Tube / Container:	misc container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	83033					

	APTT	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL citrated plasma					
Tube / Container:	blue top, exact draw required per vacuum					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	expedite to lab within 30 minutes, on ice if delayed					
CPT4:	85730					

	Arterial Blood Gases	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Special arterial collection					
Tube / Container:	ABG kit syringe					
Setup Schedule:	all shifts					
Turnaround Times:		<1	<1	<1	<1	hrs
Comments:	Special arterial collection					
CPT4:	82803					

	ASO	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	Red					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	86060					

	AST (SGOT)	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84450					

	B12	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 ml serum					
Tube / Container:	red, no SST					
Setup Schedule:	Mon, Wed, Fri; Dayshift only					
Comments:						
CPT4:	82607					

	Beta Strep Group B - See					

Micro Collection Section

See Microbiology Collection Section 4

	Bile, Misc Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL fluid					
Tube / Container:	misc container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	specify type of fluid					
CPT4:	81003					

	Bilirubin, Serum	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red or green					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	(0.2mL neonatal specimen)					
CPT4:	82247					

	Blood Gases, Capillary, Ped.	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.2 mL plasma					
Tube / Container:	capillary gas tubes in Lab					
Setup Schedule:	all shifts					
Turnaround Times:		<1	<1	<1	<1	hrs
Comments:	Expedite to lab on ice					
CPT4:	82803					

Blood Gases, Adult (see "Arterial Blood Gases")

	Blood, Emesis	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL emesis					
Tube / Container:	misc container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82271					

	Blood, Miscellaneous Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL fluid					
Tube / Container:	misc container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Specify source					
CPT4:	82271					

	Blood, NG drainage	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 drainage					
Tube / Container:	misc container					
Setup Schedule:	all shifts					

Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82271					

	Blood, Occult, Stool	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	small amount of stool					
Tube / Container:	stool container or occult blood slide					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	See Microbiology Collection - Section 4					
CPT4:	82270					

	Bone Marrow/Bone Biopsy
	Call to schedule - Special collection by pathologists or MD
CPT4:	

	BUN, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84520					

	C. Difficile Toxin - see Micro Collection -Section 4

	Calcium, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82310					

	Calcium, Ionized, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Calculation performed on all abnormal Calcium levels, based on Calcium and Total Protein results					
CPT4:	82330					

	Calcium, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	24-Hr collection					

Tube / Container:	24-hr urine container					
Setup Schedule:	Mon-Sun First Shift					
Turnaround Times:					1	day
Comments:	Refrigerate during collection, no preservative					
CPT4:	82340					

	Cardiac Enzymes	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
	See "Profiles" at the end of this section, page 46 - 47. SGOT, AST, and CPK may be ordered separately as indicated.					

	CBC with Differential	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL whole blood					
Tube / Container:	3 mL lavender tube					
Setup Schedule:	all shifts					
Turnaround Times:		35 min*	1	1	1-4	hrs
Comments:	*35 minutes with automated diff, manual diff may take 1 hour					
CPT4:	85025(auto), or 85027 + 85007 (manual)					

	CBC without Differential	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL whole blood					
Tube / Container:	3 mL lavender					
Setup Schedule:	all shifts					
Turnaround Times:		35 min	1	1	1-4	hrs
Comments:						
CPT4:	85027					

	CEA	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL serum					
Tube / Container:	red top, no sst					
Setup Schedule:	M-W-F 1st shift					
Turnaround Times:					24-72	hrs
Comments:						
CPT4:	82378					

	Cell Count, Ascitic Fluid	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL fluid					
Tube / Container:	lavender tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						

CPT4: 89051

	Cell Count, Spinal Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL CSF					
Tube / Container:	Plastic vial					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	89051					

	Cell count, Synovial Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL fluid					
Tube / Container:	lavender tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	89051					

	Cell Count, Thoracentesis	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL fluid					
Tube / Container:	lavender tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	89051					

	Cell Count, Misc Fld, Specify	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL fluid					
Tube / Container:	lavender					
Setup Schedule:	all shift					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	89051					

	Chlamydia, ELFA	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	See Micro Section 4					
Tube / Container:						
Setup Schedule:						
Turnaround Times:						
Comments:						
CPT4:	87320					

	Chloride, CSF	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL csf					
Tube / Container:	plastic vial					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82438					

Chloride, Serum

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma				
Tube / Container:	red, green , or sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	82435				

Chloride, Urine

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	24-hr urine, or random urine (2.0 mL)				
Tube / Container:	24 hr or random urine container				
Setup Schedule:	all shifts				
Turnaround Times:				1	day
Comments:	Refrigerate during collection No preservative required				
CPT4:	82436				

Cholesterol, Total

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma				
Tube / Container:	red, green, or sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	82465				

Cholesterol, HDL

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum				
Tube / Container:	red				
Setup Schedule:	Tues & Thurs				
Turnaround Times:				24-72	hrs
Comments:	fasting				
CPT4:	83718				

CK Total

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum				
Tube / Container:	red, or sst				
Setup Schedule:	all shifts				
Turnaround Times:	35 min.	65 min.	65 min	1-4	hrs
Comments:	Affected by hemolysis				
CPT4:	82550				

CKMB, Automated

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum				
Tube / Container:	red or sst				
Setup Schedule:	all shifts				

Turnaround Times:		35 min	65 min	65 min	1-4	hrs
Comments:						
CPT4:	82553					

	CMV Urine Cytology	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	10 mL random urine					
Tube / Container:	urine container					
Setup Schedule:	M-F					
Turnaround Times:					24-48	hrs
Comments:	Performed by Pathologists					
CPT4:						

	CO, Carbon Monoxide	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL whole blood					
Tube / Container:	ABG kit or venous draw green top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	expedite within 15 minutes on ice					
CPT4:	82375					

	CO2 Content	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82374					

	Colony Count - reported on all positive cultures
	See Microbiology Collection Section 4

	Coomb's Test - Direct	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	whole blood					
Tube / Container:	10 mL Lavender top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	See section one overview					
CPT4:	86880					

	Coomb's Test - Indirect	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	2 mL EDTA plasma preferred, may use serum from red top (without serum separator gel)					
Tube / Container:	10 mL lavender top preferred, may use 15mL plan red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	See Section I - Overview , page 7					

CPT4: 86850

	Cortisol, AM	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red top or sst					
Setup Schedule:	M-F (Sat STAT only- first shift)					
Turnaround Times:	On days performed =				1-4	hrs
Comments:	No hemolysis allowed Timing for AM is important due to differences in normal ranges					
CPT4:	82533					

	Cortisol, PM	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red top or sst					
Setup Schedule:	M-F (Sat. STAT only- first shift)					
Turnaround Times:	On days performed =				1-4	hrs
Comments:	No hemolysis allowed Timing for AM is important due to differences in normal ranges					
CPT4:	82533					

	Creatinine Clearance	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	24-hr urine and 0.5 mL serum					
Tube / Container:	24-hr urine container and red,green or SST					
Setup Schedule:	Mon-Sun First shift					
Turnaround Times:					1	day
Comments:	Serum creatinine required during period of urine collection; Refrigerate urine, no preservative					
CPT4:	82575					

	Creatinine, Serum	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82565					

	Creatinine, Urine	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	24-hr urine					
Tube / Container:	24 hr urine container					
Setup Schedule:	Mon-Sun First Shift					
Turnaround Times:					1	day
Comments:	Refrigerate, no preservative					
CPT4:	82570					

	Crossmatch	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2-5 mL EDTA plasma preferred + 2 mL					

	EDTA whole blood					
Tube / Container:	Two - 10 mL lavender top tubes preferred; may use serum from plain red top if necessary					
Setup Schedule:	all shifts					
Turnaround Times:	with available blood	1	1	1-2	1-4	hrs
Comments:						
CPT4:	86920					

	CRP, Quantitative	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Update 2/5/98: Testing on Newborns should be ordered Urgent or STAT.					
CPT4:	86140					

	Cryptococcal Antigen	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	l-2 mL serum					
Tube / Container:	red					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	86403					

	Crystals, Fluid	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL fluid					
Tube / Container:	lavender prohibits clotting of cells					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	89060					

Culture, Anaerobic

See Microbiology Collection - Section 4

Culture, Blood

See Microbiology Collection Secton 4

Culture, Body Fluid

See Microbiology Collection - Section 4

Culture, Bronchial, Routine

See Microbiology Collection - Section 4

Culture, GC

See Microbiology Collection - Section 4

Culture, Mycology (Fungus)

See Microbiology Collection - Section 4

Culture, Nasopharyngeal, Routine

See Microbiology Collection - Section 4

Culture, Rectal Swab

See Microbiology Collection - Section 4

Culture, Routine, Misc

See Microbiology Collection - Section 4

Culture, Spinal Fluid

See Microbiology Collection - Section 4

Culture, Sputum, Routine

See Microbiology Collection - Section 4

Culture, Sputum, AFB

See Microbiology Collection - Section 4

Culture, Stool, Routine

See Microbiology Collection - Section 4

Culture, Trachial, Routine

See Microbiology Collection - Section 4

Culture, Throat, Routine

See Microbiology Collection - Section 4

Culture, Urine, Routine

See Microbiology Collection - Section 4

Culture, Wound, Routine

See Microbiology Collection - Section 4

Cytology, Ascitic Fluid

Comments: See Cytology Collection - Section 4

CPT4:

Cytology: Bronchial Brushings

Comments: See Cytology Collection - Section 4

CPT4: 88104

Cytology:
Bronchial Washings

Comments: See Cytology Collection - Section 4
CPT4: 88104

Cytology:
Brushings, Misc., Specify

Comments: See Cytology Collection - Section 4
CPT4: 88104

Cytology: CSF

Comments: See Cytology Collection - Section 4
CPT4: 88104

Cytology, Fluid, Misc
(not listed elsewhere)

Comments: See Cytology Collection - Section 4
CPT4: 88104

Cytology: FNA Per Slide

Comments: See Cytology Collection - Section 4
CPT4: 88172

Cytology: GYN (PAP, 1-slide)

Comments: See Cytology Collection - Section 4
CPT4: 88150

Cytology: GYN (PAP, 2-slide)
(special order, usually order GYN PAP)

Comments: See Cytology Collection - Section 4
CPT4:

Cytology: Herpes

Comments: See Cytology Collection - Section 4
CPT4:

Cytology: Other, Specify

Comments: See Cytology Collection - Section 4
CPT4:

Cytology: Pleural Fluid

Comments: See Cytology Collection - Section 4
CPT4: 88104

Cytology: Sputum

Comments: See Cytology Collection - Section 4
CPT4: 88108

Cytology: Urine

Comments: See Cytology Collection - Section 4
CPT4: 88104

Cytology: Washing, Specify

Comments: See Cytology Collection - Section 4
CPT4: 88104

D-Dimer (Latex Agglutination)

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL plasma				
Tube / Container:	blue top (Citrate)				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Expedite to lab with 30 minutes				
CPT4:	85378				

D-Dimer - VIDAS

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL plasma				
Tube / Container:	blue top (Citrate)				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Expedite to lab with 30 minutes				
CPT4:	85379				

Depakene

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum				
Tube / Container:	red, no sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	80164				

Digoxin

Specimen Req.: Serum
Tube / Container: Red, No SST

Setup Schedule:	24 hrs. per day, 7 days per week					
Turnaround Times:		35 min	65 min	1-2	2-4	
CPT4:	80162					

	Dilantin	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum					
Tube / Container:	Red , No SST					
Setup Schedule:	all					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	"Phenytoin"					
CPT4:	80185					

	Electrolytes, serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Hemolysis affects results					
CPT4:	80051					

	Electrolytes, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	24-hr urine or random					
Tube / Container:	24-hr container or urine cup					
Setup Schedule:	Mon-Sun First Shift					
Turnaround Times:					1	day
Comments:	Refrigerate specimen, no preservative					
CPT4:	80051					

	Eluate	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	10 mL					
Tube / Container:	lavendar top					
Setup Schedule:	All shifts					
Turnaround Times:						
Comments:						
CPT4:	86860					

	Enteric ID
	See Microbiology Collection for Stools - Section 4

	Eosinophil Count	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	whole blood					
Tube / Container:	3 mL lavender					
Setup Schedule:	First Shift					

Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	85092					

	Eosinophil Smear	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	stool or urine					
Tube / Container:	stool cup or urine cup					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	89190					

	ESR (Sed Rate)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	Whole blood					
Tube / Container:	Purple-top tube (EDTA)					
Setup Schedule:	all shifts					
Turnaround Times:		30	30	30	30-150	min
Comments:						
CPT4:	85651					

	Fat, Stool Qualitative
	See Microbiology Collection - Section 4

	Fat, Stool, Quantitative
	See Microbiology Collection - Section 4

	Ferritin	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-1 mL serum					
Tube / Container:	red					
Setup Schedule:	M-F	FIRST SHIFT ONLY				
Turnaround Times:		2	2	2	2-4	hrs
Comments:	No hemolysis					
CPT4:	82728					

	Fetal Screen Test	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	whole blood					
Tube / Container:	3 mL lavender					
Setup Schedule:	all shifts, usually performed on first shift					
Turnaround Times:		2	2	2	2-4	hrs
Comments:						
CPT4:	85461					

	Fibrin Split Products (FSP or FDP)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	

Specimen Req.:	2 mL plasma					
Tube / Container:	blue top					
Setup Schedule:	all					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Expedite to lab within 30 minutes					
CPT4:	85362					

	Fibrinogen, Qt.	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL plasma					
Tube / Container:	blue top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Expedite to lab within 30 minutes					
CPT4:	85384					

	Folate	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	7 mL serum					
Tube / Container:	red, sst					
Setup Schedule:	Mon, Wed, Fri; Dayshift only					
Turnaround Times:						
Comments:						
CPT4:	82746					

	Fresh Frozen Plasma	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	10 mL					
Tube / Container:	lavendar top					
Setup Schedule:	All shifts					
Turnaround Times:						
Comments:	Thawed as needed; Call Blood Bank					
CPT4:	86927					

	Frozen Section
	Notify Lab STAT 283-2167, 283-2327
CPT4:	88314

	Gentamicin, Peak	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-1 mL serum					
Tube / Container:	red, so sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Draw 1 hour after infusion begins, timing is critical, note time of dose					
CPT4:	80170					

	Gentamicin, Random	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-l.0 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs

Comments:	Note time of dose					
CPT4:	80170					

	Gentamicin, Trough	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-l.0 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Draw 30 minutes prior to next dose Timing is critical Note time of last dose					
CPT4:	80170					

	GGPT, Gamma Glutamal Transaminase	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum					
Tube / Container:	red or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82977					

	Glucose (Blood)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green or sst					
Setup Schedule:	all shifts					
Turnaround Times:		35 min	35 min	1-2	1-4	hrs
Comments:	fasting unless otherwise indicated					
CPT4:	82947					

	Glucose with Dose	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Glucola can be given per physician's order					
CPT4:	82947					

	Glucose, 2-hour	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red, green or sst					
Setup Schedule:	all shifts					
Turnaround Times:					3	hrs
Comments:	Fasting, usually performed in AM for					

patient convenience

CPT4: 82947

	Glucose, 2-hr Tolerance	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Call to schedule					
Tube / Container:	red, green or sst					
Setup Schedule:						
Turnaround Times:						
Comments:	Call to schedule; Fasting Done in AM for patient convenience				3	hrs
CPT4:	82951					

	Glucose, 3-hr Tolerance	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Multiple blood draws					
Tube / Container:	red, green or sst					
Setup Schedule:						
Turnaround Times:					4	hrs
Comments:	Fasting, Call to schedule, Start before noon					
CPT4:	82951					

	Glucose, 4-hour Tolerance	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Multiple blood draws					
Tube / Container:	red, green or sst					
Setup Schedule:						
Turnaround Times:					5	hrs
Comments:	Fasting, Call to schedule, Start before noon					
CPT4:	82951					

	Glucose, 5-hour Tolerance	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Multiple blood draws					
Tube / Container:	red, green or sst					
Setup Schedule:						
Turnaround Times:					6	hrs
Comments:	Fasting, Call to schedule, Start before noon					
CPT4:	82951					

	Glucose, 6-hour Tolerance	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Multiple blood draws					
Tube / Container:	red, green or sst					
Setup Schedule:						
Turnaround Times:					7	hrs
Comments:	Fasting, Call to schedule, Start before noon					
CPT4:	82951					

	Glucose, CSF	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL CSF					
Tube / Container:	plastic vial					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82947					

	Glucose, Paracentesis Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top					
Setup Schedule:	all shift					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82947					

	Glucose, Synovial Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL fluid					
Tube / Container:	red top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82947					

	Glucose, Thoracentesis Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL fluid					
Tube / Container:	red top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82947					

	Glucose, Urine, Qualitative	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	5-10 mL random urine					
Tube / Container:	urine cup					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82947					

	Glucose, Misc.Fluid, Specify	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL fluid					
Tube / Container:	red top					
Setup Schedule:	all shift					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Specify type of fluid					

CPT4: 82947

Glycohemoglobin, (Hgb A1C)

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL EDTA whole blood				
Tube / Container:	Lavendar EDTA tube				
Setup Schedule:	First shift only, M-F batched				
Turnaround Times:					
Comments:	refrigerate				
CPT4:	83036				

Gram Stain

See Microbiology Collection - Section 4

HCG, Quantitative, Serum

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum				
Tube / Container:	red or sst				
Setup Schedule:	all shift				
Turnaround Times:	60-90	60-90	60-90	60-180	min.
Comments:	High values may require extra time to rerun as a dilution				
CPT4:	84702				

HCG, Qualitative, Serum

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum				
Tube / Container:	red or sst				
Setup Schedule:	all shift				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	84703				

HCG, Qualitative, Urine - see Pregnancy Test

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2-10 mL random urine				
Tube / Container:	urine container				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Serum test preferred				

CPT4: 81025

HDL,High Density Lipoprotein

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum				

Tube / Container:	red or sst					
Setup Schedule:	Tues and Thurs ROUTINELY PERFORMED ON FIRST SHIFT ONLY					
Turnaround Times:					1-5	days
Comments:	14 hour fasting					
CPT4:	83718					

	Hemoglobin A1C					
	(see Glycohemoglobin)					
	Hemoglobin Electrophoresis	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	whole blood					
Tube / Container:	lavender tube					
Setup Schedule:	M-F first shift, batched					
Turnaround Times:					2-3	days
Comments:						
CPT4:	83020					

	Hemosiderin, Qualitative	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	Random urine.5-10 mL					
Tube / Container:	Random urine cup					
Setup Schedule:	Varies					
Turnaround Times:	Same Shift , call if needed STAT					
Comments:						
CPT4:	83070					

	Hepatitis B Surface Antigen (HBsAG)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum					
Tube / Container:	red					
Setup Schedule:	Tues-Thurs (except Inpatient OB patients done					
Turnaround Times:	daily Mon-Sat)				24-72	hrs
Comments:	STAT's expedited when requested					
CPT4:	87340					

	HIV-1 & 2 Screen	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL serum					
Tube / Container:	red or sst					
Setup Schedule:	M-W-F or as needed, batched					
Turnaround Times:	Once received	2	4	4	24-72	hrs
Comments:	Available STAT on the "Source" for Needlestick Protocol					
CPT4:	86703					

	Rapid HIV	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	7 mL serum					
Tube / Container:	red, sst					

Setup Schedule:	all shifts					
Turnaround Times:		1	1	1	1	hrs
Comments:	Draw within 2 hrs of needlestick exposure; Drawn on source only!					
CPT4:	86701					

	HPFAST					
Comments:	See Section 4 - Microbiology Collection					
CPT4:						

	IgA Immunoglobulin	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum					
Tube / Container:	red or sst					
Setup Schedule:						
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82784					

	IgG Immunoglobulin	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum					
Tube / Container:	red or sst					
Setup Schedule:						
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82784					

	IgM Immunoglobulin	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL serum					
Tube / Container:	red or sst					
Setup Schedule:						
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	82784					

	Immunofix: **Serum Electrophoresis**	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL serum					
Tube / Container:	red					
Setup Schedule:	M-F First shift					
Turnaround Times:	M-F				1	day
Comments:	Not done on weekends					
CPT4:	86334					

	Immunofix:	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	

Urine Electophoresis

Specimen Req.:	24-hr urine					
Tube / Container:	24-hr urine container					
Setup Schedule:	M-F First shift					
Turnaround Times:					1	day
Comments:	Refrigerate urine, no preservative Not done on weekends					
CPT4:	86334					

Mixing Studies - Call to Schedule (sent out)

India Ink Prep

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL CSF					
Tube / Container:	plastic vial					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1	1-2	hrs
Comments:	Preferred test is Cryptococcal Antigen					
CPT4:	87210					

Iron, Serum

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red					
Setup Schedule:	M-W-F FIRST SHIFT					
Turnaround Times:		2	2	2	24-48	hrs
Comments:	Call if needed STAT					
CPT4:	85340					

Iron with TIBC (Total Iron Binding Capacity)

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	2 mL serum					
Tube / Container:	red					
Setup Schedule:	M-W-F					
Turnaround Times:		2	2	2	24-48	hrs
Comments:	Generally not available stat					
CPT4:	83550					

Ketones, Urine

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 2 mL random urine					
Tube / Container: urine container					
Setup Schedule: all shifts					
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4: 81003					

Kleihauer/Betke Stain

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 2 mL whole blood					
Tube / Container: lavender tube					
Setup Schedule: all shifts					
Turnaround Times:	2	2	2	4-6	hrs
Comments: Generally performed on Day shift					
CPT4: 85460					

KOH Prep

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:					
Tube / Container:					
Setup Schedule:					
Turnaround Times:	1	1	1-2	1-2	hrs
Comments: See Microbiology Collection - Section 4					
CPT4: 87210					

Lactic Acid

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 0.5-1 mL whole blood					
Tube / Container: green top on ice					
Setup Schedule: All shifts					
Turnaround Times:	<1	<1	<1	<1	hrs
Comments: Call for instructions					
CPT4: 83605					

LAP, Leukocyte Alkaline Phosphatase

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 3 mL whole blood					
Tube / Container: green					
Setup Schedule: First shift Mon-Fri					
Turnaround Times:				24-48	hrs
Comments:					
CPT4: 85540					

LDH, LD Total

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 0.5 mL serum					
Tube / Container: red top					
Setup Schedule: all shifts					
Turnaround Times:	1	1	1-2	1-4	hrs
Comments: No hemolysis allowed					

CPT4: 83615

LD Isoenzymes

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 - l.0 mL serum				
Tube / Container:	red top				
Setup Schedule:	M-Sat First Shift				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	No hemolysis, stored at rm temp.				
CPT4:	83625				

LDH (LD) Misc Fluid, Specify

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 ml fluid				
Tube / Container:	sterile tube				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	83615				

Lipase, Serum

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma				
Tube / Container:	red or green				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	83690				

Lipase, Urine

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	24-hr urine				
Tube / Container:	24-hr urine container				
Setup Schedule:	Mon-Sun First shift				
Turnaround Times:				1	day
Comments:	Refrigeratre urine, no preservatives				
CPT4:	83690				

Lipase, Fluid, Specify

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL fluid				
Tube / Container:	red top				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	83690				

Lipid Profile

See "Profiles" at the end of this section
pages 47-49

Lithium

STAT	URGENT	TIMED	ROUTINE

Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red or green					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	80178					

Liver Profile

See "Profiles" at the end of this section , pages 47-49

Magnesium, Serum

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum or plasma					
Tube / Container:	red or green					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	83735					

Malaria Smear

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	5.0 mL whole blood					
Tube / Container:	lavender					
Setup Schedule:	M-F First shift					
Turnaround Times:					24-48	hrs
Comments:						
CPT4:	87207					

Mebaral - See Phenobarb

Menigitis, Screen, CSF

See Microbiology Collection - Section 4

Menigitis Screen, Serum

See Microbiology Collection - Section 4

Menigitis Screen, Urine

See Microbiology Collection - Section 4

Methemoglobin

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	whole blood, 1 mL					
Tube / Container:	green top or ABG kit syringe					
Setup Schedule:	all shifts					
Turnaround Times:		<1	<1	<1	1	hrs

Comments:	arterial or venous draw, keep stppered
	expedite to lab within 15 minutes
CPT4:	83050

	Mono Screen (Monolert)	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	86308					

	Mycology (Fungus) Smear
	See Microbiology Collection - Section 4

	Mycoplasma Screen	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum					
Tube / Container:	red					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	86156					

	Myoglobin, Urine, Qual.	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	5-10 mL random urine					
Tube / Container:	urine container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	83874					

	Mysoline	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:						
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	80188					

	Osmolality, Serum	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum					
Tube / Container:	red					

Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	83930					

	Osmolality, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	5-10 mL urine					
Tube / Container:	urine container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	83935					

	Osmolality, Stool	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	5-10 mL LIQUID Stool					
Tube / Container:	stool container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84999					

Ova and Parasites

See Microbiology Collection - Section 4

	pH Blood	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 mL whole blood					
Tube / Container:	arterial kit or green top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	arterial or venous, specify					
CPT4:	82800					

	pH Fluid, Specify	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1.0 mL fluid					
Tube / Container:	stoppered tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	specify type of fluid					
CPT4:	83986					

	pH Stool	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	

Specimen Req.:	5-10 gm stool					
Tube / Container:	stool container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	83986					

	pH Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	2-5 mL urine					
Tube / Container:	urine container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	81003					

	Phenobarbital	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 - 1.0 mL serum					
Tube / Container:	red, not sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	80184					

	Phosphorus, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5 -1.0 mL serum or plasma					
Tube / Container:	red,green or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84100					

	Phosphorus, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	24-hr urine collection					
Tube / Container:	24-hr urine container					
Setup Schedule:	Mon-Sun First Shift					
Turnaround Times:					1	day
Comments:	No preservative, refrigerate during collection					
CPT4:	84133					

	Pinworm Slide
	See Microbiology Collection -Section 4
	Platelet Aggregation Testing
	Test referred to outside laboratory - call 283-2167 for collection information

	Porphyrin Screen, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:						

Tube / Container:	test referred to Smithkline - see section 3					
Setup Schedule:						
Turnaround Times:					2-8	hrs
Comments:	Tests available are Porphyrin, fractionated for random or 24-hr urine.					
CPT4:	84119					

	Potassium, Serum	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-1.0 mL serum or plasma					
Tube / Container:	red, green, or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Hemolysis falsely elevated level					
CPT4:	84132					

	Potassium, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	24-hr urine or random collection					
Tube / Container:	24-hr urine container, or urine cup					
Setup Schedule:	Mon-Sun First Shift					
Turnaround Times:					1	day
Comments:	No preservative, refrigerate during collection					
CPT4:	84133					

	Potassium, Stool (Fecal)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	5-10 mL LIQUID Stool					
Tube / Container:	red top or stool container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84311					

Pregnancy Test, Urine Qual.

See "HCG, qualitative"

Prenatal Profile First Trimester

See "Profiles" at the end of this Section, Page47

Prenatal Profile Third Trimester

See "Profiles" at the end of this section, pages 47-49

	Protein Electrophoresis	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	

Specimen Req.: 7 mL serum

Tube / Container: red, no sst
Setup Schedule: Mon, Wed, Fri; Dayshift only
Turnaround Times:

Comments:

CPT4: 84165

	Protein, Ascitic Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84157					

	Protein, CSF, Total	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	plastic tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84157					

	Protein, Misc Fluid, Quant.	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Specify fluid type					
CPT4:	84157					

	Protein, Synovial Fluid	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84157					

	Protein, Thoracentesis Fld	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						

CPT4: 84157

	Protein, Total, Serum	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL serum or plasma					
Tube / Container:	red, green or sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84155					

	Protein, Urine Quantitative	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	24-hr urine					
Tube / Container:	24-hr urine collection container					
Setup Schedule:	Mon-Sun First shift only					
Turnaround Times:					1	day
Comments:	No peservative, refrigerate during collection					
CPT4:	84155					

	Prothrombin Time (Protime)	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-l mL plasma					
Tube / Container:	Blue top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Expedite to lab within 30 minutes; stable unspun, unopened for 4 hours, refrig/room temp					
CPT4:	85610					

	PSA Serum	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1 mL serum					
Tube / Container:	red or sst					
Setup Schedule:	Tues and Thursday -FIRST SHIFT					
Turnaround Times:					1-5	days
Comments:	Call lab if needed sooner					
CPT4:	84153					

	RA, Rheumatoid Factor	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum ï currently referred to reference lab					
Tube / Container:	red					
Setup Schedule:	all shifts					
Comments:						
CPT4:	86431					

Reducing Substances: Stool

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	5-10 gm stool				
Tube / Container:	stool container				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	81005				

Reducing Substances: Urine

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	5 mL urine, random				
Tube / Container:	urine cup				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	81002				

Renal Profile

See "Profiles" at the end of this section, pages 47-49

Reticulocyte Count

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL whole blood				
Tube / Container:	lavender tube				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	85045				

Rho Immune Globulin

Specimen Req.:
Tube / Container:
Setup Schedule:
Turnaround Times:
Comments: Call to schedule with Blood Bank
See Overview, Section 1 Page 7

CPT4: J2790

Rotavirus, Stool

See Microbiology Collection - Section 4

RPR – see Anti Syphilis IgG

RSV, Respiratory Syncial

Virus - Nasial Washing

See Microbiology Collection - Section 4

Rubella

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL serum					
Tube / Container:	red					
Setup Schedule:	First shift - batched as needed					
Turnaround Times:	Average				24-72	hrs
Comments:						
CPT4:	86762					

Salicylate, Serum

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5- 1 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	80196					

Sed Rate - see ESR

Semen Analysis

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Semen					
Tube / Container:	Sterile container					
Setup Schedule:	First shift M-Sat					
Turnaround Times:					24	hrs
Comments:	Must receive within one hour of collection Keep at body temperature in transit					
CPT4:	89320					

Sickle Cell Prep

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	3-5 mL EDTA whole blood					
Tube / Container:	Lavender EDTA tube					
Setup Schedule:	All shifts					
Turnaround Times:		1	1	1	4	hrs
Comments:						
CPT4:	85660					

Sodium, Serum

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL serum, or plasma					
Tube / Container:	red, green, or sst					

Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84295					

	Sodium, Stool, (Fecal)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	5-10 ml LIQUID stool					
Tube / Container:	red top or stool container					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84302					

	Sodium, Urine	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	24-hr urine or random urine					
Tube / Container:	24-hr urine container or urine cup					
Setup Schedule:	Mon-Sun First shift					
Turnaround Times:					1	day
Comments:	Refrigerate urine during collection, no preservative					
CPT4:	84300					

	Specific Gravity: Synovial Fluid	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84315					

	Specific Gravity: Paracentesis Fluid	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84315					

	Specific Gravity:	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	

Thoracentesis Fluid

Specimen Req.:	0.5-1 mL fluid					
Tube / Container:	red top tube					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	84315					

Specific Gravity: Urine

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL urine					
Tube / Container:	urine cup					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	81003					

Sperm Count

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	Semen					
Tube / Container:	Sterile container					
Setup Schedule:	First shift M-Sat					
Turnaround Times:					24	hrs
Comments:	Must receive within one hour of collection Keep at body temperature in transit					
CPT4:	89310					

Strep Culture, GROUP A

See Microbiology Collection - Section 4

Strep Screen, GROUP A

		STAT	URGENT	TIMED	ROUTINE	
	See Microbiology Collection - Section 4					

Surveys, Chemistry

See "Profiles" at the end of this section, pages 47-49

T3

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red					
Setup Schedule:	M-F First shift					
Turnaround Times:	On days when run:	1	1	1-2	1-4	hrs
Comments:						
CPT4:	84479					

T4

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red					
Setup Schedule:	M-F First shift					

Turnaround Times:	On days when run:	1	1	1-2	1-4	hrs
Comments:						
CPT4:	84436					

	T4, Free	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red					
Setup Schedule:	M-F First shift					
Turnaround Times:	On days when run:	2	2	2	24-48	hrs
Comments:						
CPT4:	84439					

	Tegretol (Carbamazepine)	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	80156					

	Template Bleeding Time	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	special collection					
Tube / Container:	special collection					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	85002					

	Theophylline	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	0.5-1.0 mL serum					
Tube / Container:	Red, No SST					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:						
CPT4:	80198					

	Thrombin Time	**STAT**	**URGENT**	**TIMED**	**ROUTINE**	
Specimen Req.:	1 mL plasma					
Tube / Container:	Blue top					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Expedite to lab within 30 minutes or place on ice					
CPT4:	85670					

	Thyroid Profile with TSH
	See "Profiles" at the end of this section

Thyroid Uptake

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	7 mL serum				
Tube / Container:	red, sst				
Setup Schedule:	day shift only				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4:	84479				

Tobramycin, Peak

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1 mL serum				
Tube / Container:	red, no sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Draw one hour after infusion begins Timing is critical				
CPT4:	80200				

Tobramycin, Random

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL serum				
Tube / Container:	red, no sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Note time of dose				
CPT4:	80200				

Tobramycin, Trough

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL serum				
Tube / Container:	red, no sst				
Setup Schedule:	all shifts				
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:	Draw 30 minutes prior to next dose Timing is critical				
CPT4:	80200				

TSH

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	0.5-1.0 mL serum				
Tube / Container:	red				
Setup Schedule:	M-F First shift				
Turnaround Times:				24	hrs
Comments:					
CPT4:	84443				

Trichomonas Prep

	STAT	URGENT	TIMED	ROUTINE	
See Microbiology Collection - Section 4					

Triglyceride

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 0.5-1 mL serum or plasma					
Tube / Container: red, gree, or sst					
Setup Schedule: all shifts					
Turnaround Times:	1	1	1-2	1-4	hrs
Comments: 12-14 hr fast					
CPT4: 84478					

Troponin I

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 1.0 mL serum					
Tube / Container: red or sst					
Setup Schedule: all shifts					
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4: 84484					

Type and Screen

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: EDTA Plasma preferred + whole blood ; serum maybe substituted for EDTA plasma					
Tube / Container: Two 10-mL Lavender tubes preferred or 15mL red and 3 mL lavender					
Setup Schedule:					
Turnaround Times: Depends on blood availability	1	1	1-2	1-4	hrs
Comments: See "Blood Bank" p.7, Overview Section					
CPT4: 86900, 86901, 86850					

Urea Nitrogen, Urine

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 24-hr urine					
Tube / Container: 24-hr urine container					
Setup Schedule: Mon-Sun First Shift					
Turnaround Times:				1	day
Comments: Refrigerate, No preservative					
CPT4: 84540					

Uric Acid, Serum

	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.: 0.5-1 mL serum or plasma					
Tube / Container: red, green, or sst					
Setup Schedule: all shifts					
Turnaround Times:	1	1	1-2	1-4	hrs
Comments:					
CPT4: 84550					

	Uric Acid, Urine	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	24-hr urine					
Tube / Container:	24-hr urine container					
Setup Schedule:	Mon-Sun First shift					
Turnaround Times:					1	day
Comments:	Refrigerate, No preservative					
CPT4:	84560					

	Urinalysis, Cath Specimen	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	10-15 mL urine					
Tube / Container:	urine cup, sterile if culture may be added					
Setup Schedule:	all shifts					
Turnaround Times:		30 min	1	1	1-4	hrs
Comments:						
CPT4:	81003					

	Urinalysis, Midstream	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	10-15 mL urine					
Tube / Container:	urine cup, sterile if culture may be added					
Setup Schedule:	all shifts					
Turnaround Times:		30 min	1	1	1-4	hrs
Comments:						
CPT4:	81003					

	Urinalysis, Routine	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	10-15 mL urine					
Tube / Container:	urine cup, sterile if culture may be added					
Setup Schedule:	all shifts					
Turnaround Times:		30 min	1	1-2	1-4	hrs
Comments:						
CPT4:	81003					

	Urine, Microscopic	STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	10-15 mL urine					
Tube / Container:	urine cup, sterile if culture may be added					
Setup Schedule:	all shifts					
Turnaround Times:		30 min	1	1-2	1-4	hrs
Comments:	Performed on all qualifying urine dipsticks with positve blood, WBC, Protein and Nitrite					
CPT4:	81001					

Valproic Acid - see Depakene

Vancomycin, Peak

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Draw two hours after beginning of infusion <1250 mg dose Draw two & a half hrs after beginning of infusion >1250 mg dose					
CPT4:	80202					

Vancomycin, Random

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Note time of last dose					
CPT4:	80202					

Vancomycin, Trough

		STAT	URGENT	TIMED	ROUTINE	
Specimen Req.:	1.0 mL serum					
Tube / Container:	red, no sst					
Setup Schedule:	all shifts					
Turnaround Times:		1	1	1-2	1-4	hrs
Comments:	Draw 30 minutes prior to next dose Timing is critical					
CPT4:	80202					

VDRL - for serum see RPR

Wright stain for WBC-stool

See Microbiology Collection - Section 4

"Wet Prep" -see Trichomonas Prep

See Microbiology Collection - Section 4

LABORATORY PANELS

Changes in Federal Legislation require that the use of predefined panels be restricted to those panels
that are defined in the current AMA CPT4 code book and those that are released subsequently in Federal

80074	Acute Hepatitis Panel	NEW
86709	Hepatitis A Antibody (HAAb), IgM	
86705	Hepatitis B Core Antibody (HbCAb), IgM	
87340	Hepatitis B Surface Antigen (HbSAg)	
86803	Hepatitis C Antibody	

80048	Basic Metabolic Panel - Survey 8/Chem 8	Replaces Sur 7/Chem 7
This is an AMA accepted panel based on the 2000 CPT4 Code book.		
82310	Calcium	
82374	C02 (Carbon Monoxide, bicarbonate)	
82435	Chloride, blood	
	Creatinine, blood	
82565		
	Glucose, quantitative	
82947		
84132	Potassium, serum	
	Sodium, serum	
84295		
84520	Urea Nitrogen, quantitative	

80053	Comprehensive Metabolic Panel - Chem 13	NEW
This is an AMA accepted panel based on the 2000 CPT4 Code book.		
82040	Albumin, serum	
82247	Bilirubin, Total	
82310	Calcium, total	
82374	Carbon Dioxide	

	Chloride, blood
82435	
82565	Creatinine / EGFR, blood
	Glucose, quantitative
82947	
84075	Phosphatase, alkaline
84132	Potassium, serum
84155	Protein, total
84295	Sodium, serum
84460	ALT (SGPT)
84450	AST (SGOT)
84520	Urea Nitrogen (BUN), quantitative

Coronary Risk Profile - see Lipid Profile

80051 Electrolytes Panel

This is an AMA accepted panel based on the 2000 CPT4 Code book.

82374	C02 (Carbon Monoxide, bicarbonate)
	Chloride, blood
82435	
	Potassium, serum
84132	
84295	Sodium, serum

80076 Hepatic Function Panel

This is an AMA accepted panel based on the 2000 CPT4 Code book.

82040	Albumin, serum
82247	Bilirubin, Total
82248	Bilirubin, Direct
84075	Phosphatase, Alkaline
	AST (SGOT)
84450	
84460	ALT (SGPT)
	Protein, Total
84155	

80061 Lipid Panel

82465	Cholesterol, serum, total
83718	HDL, direct measure
84478	Triglyceride
N/C	LDL,VLDL, Chol/HDL

80055 Obstetric Panel

This is an AMA accepted panel based on the 2000 CPT4 Code book.

85022	CBC with diff -or-
85025	CBC without diff
87340	Hepatitis B Surface Antigen
86762	Rubella Antibody
86592	Anti-Syphilis Antibody (ASIGG), qualitative
86850	Antibody Screen, RBC
86900	Blood Type ABO
86901	Blood Type RH

HIV1 / HIV2 testing and Glucose Testing are not included and must be separately ordered.

80069 Renal Function Panel

This is an AMA accepted panel based on the 2000 CPT4 Code book.

82040	Albumin
82310	Calcium
82374	Carbon Dioxide
82435	Chloride
82565	Creatine
82947	Glucose
84100	Phosphate
84032	Potassium
84295	Sodium
84520	BUN

80101	Drug Panel (Urine)
	Phencyclidine
	Benzodiazepines
	Cocaine
	Amphetamines
	THC (Marijuana)
	Opiates
	Barbiturates
	Propoxyphene
	Methadone

Commonly Referred Laboratory Tests

This section contains tests commonly referred to outside laboratories due to the test being low volume, high cost, or requiring a specific specialization. This list is not all inclusive, but rather includes the top approximate 80 % of tests that are commonly referred. All tests currently being referred are listed in the hospital computer menus.

Contracted Laboratories include but are not limited to the following:

(1) Quest Diagnostics - CLIA 18D0648456 18D0323351

(2) Specialty Laboratories - CLIA 05D0550302

(3) Infectious Disease Laboratory - CLIA 18D0648480

5-HIAA, (Serotonin), Urine, Quantitative

Specimen Req.:	Aliquot of well-mixed 24-hr urine
Tube / Container:	24-hr urine container with 6N HCCL added at start of collection (pH <3.0)
Setup Schedule:	Mon thru Fri
Transport/storage:	Tranport at room temp.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Contact lab to acidify container prior to beginning collection Refrigerate during collection

ACTH, Adenocorticotrophic Hormone

Specimen Req.:	2 mL frozen EDTA Plasma
Tube / Container:	Lavender (EDTA) tube
Setup Schedule:	Mon-Wed-Thurs
Transport/Storage:	Frozen
Turnaround Times:	3-7 days
Reference Lab:	Quest Diagnostics
Comments:	

ACTH Stimulation Test

Specimen Req.:	1 mL serum X 3 (baseline, 1/2 hr, 1 hr)
Tube / Container:	Red to; No sst
Setup Schedule:	Mon-Fri, 1st shift
Transport/Storage:	
Turnaround Times:	3-7 days
Reference Lab:	Quest Diagnostics
Comments:	

Aldolase

Specimen Req.:	2 mL frozen serum (No hemolysis, minimum of 1 mL)
Tube / Container:	Plain Red top
Setup Schedule:	Mon thru Fri
Transport/storage:	Frozen
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Aldosterone, Serum

Specimen Req.:	1 mL serum (minimum 0.5 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrigerate
Turnaround Times:	1-5 days
Reference Lab:	Quest Diagnostics
Comments:	Separate serum from cells within 30 minutes

Alpha Feto Protein, Maternal

Specimen Req.:	1 mL serum (minum 0.3 mL)
Tube / Container:	Red top tube
Setup Schedule:	batched
Transport/storage:	Refrigerate

Turnaround Times:	varies
Reference Lab:	Quest Diagnostics
Comments:	Must fill out special request form

Alpha Feto Protein, Tumor Marker

Specimen Req.:	2 mL serum (minimum 0.5)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrigerate
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

AFP-3, Triple Test

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Refrigerate
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	

Alpha-1-Antitrypsin

Specimen Req.:	1 mL serum (minimum 0.25 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrigerate
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	No lipemia

Amitriptyline, (Elavil), Serum

Specimen Req.:	3 mL (minimum 1 mL)
Tube / Container:	Red top tube, not SST tube
Setup Schedule:	
Transport/storage:	Refrigerate
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	SST tube interferes with test. Draw at least 12 hrs after dose

Ana-lyzer Panel, (Lupus Panel)

Specimen Req.:	4 mL serum
Tube / Container:	red top tube
Setup Schedule:	Mon thru Sun
Transport/Storage:	Refrigerate
Turnaround Times:	1-3 days
Reference Lab:	Specialty Lab
Comments:	

ANCA, (Antiinuctophilic Cytoplasmic Antibody

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Room Temp.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Cutoff 5 AM

Angiotensin-1-Converting Enzyme

Specimen Req.:	1 mL serum (minimum 0.5 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Also known as "ACE"

B.Pertussis PCR

Specimen Req.:	Nasal Washings
Tube / Container:	Plastic vial, sterile
Setup Schedule:	
Transport/storage:	Refrigerate
Turnaround Times:	
Reference Lab:	NKC
Comments:	Refer to Microbiology Collection - Section 4

C. difficile Culture

Specimen Req.:	Random Stool
Tube / Container:	Anaerobic Transport System
Setup Schedule:	Mon thru Sun
Transport/Storage:	Room Temp. Transport
Turnaround Times:	5-7 days
Reference Lab:	Quest Diagnostics
Comments:	Refer to Microbiology Collection Section 4

CA-125, Cancer Antigen

Specimen Req.:	1 mL serum (minimum 0.3 mL)
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	2-5 days
Reference Lab:	Quest Diagnostics
Comments:	No hemolysis

CA-19-9

Specimen Req.:	1 mL frozen serum (minimum 0.5 mL0
Tube / Container:	Red top tube
Setup Schedule:	
Transport/Storage:	Frozen
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	

CA-27,29

Specimen Req.:	l mL serum (minimum 0.1 mL)
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	

Calcium, Ionized, Direct

Specimen Req.:	3.0 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Sat
Transport/Storage:	Refrig.
Turnaround Times:	1 -2 days
Reference Lab:	Jewish Hospital Laboratory
Comments:	

Ceroluplasmin, (Copper Ox)

Specimen Req.:	1 mL serum (minimum 0.3 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Chlamydia Direct, DFA

Specimen Req.:	Urogenital, Conjunctival, n+B260asopharyngeal or Rectal Sample
Tube / Container:	Microtrak Slide Collection Kit
Setup Schedule:	Mon thru Sun (cut off time 9:00 AM)
Transport/Storage:	Room Temp.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	Refer to Microbiology Collection- Section 4

Chlaymdia and GC by DNA Probe

Specimen Req.:	Conjuncitval, Endocervical or Male Urethral specimen
Tube / Container:	Gen-Probe Transport System
Setup Schedule:	
Transport/storage:	Room Temp.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	Refer to Microbiology Collection - Section 4

Chromosome Study, Adult, Bone Marrow

Specimen Req.:	
Tube / Container:	
Setup Schedule:	
Transport/Storage:	
Turnaround Times:	

Reference Lab:	
Comments:	Schedule with lab

CMV Antibody, IgG, serum

Specimen Req.:	1 mL serum (minimum 0.1 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

CMV, IGM, Serum

Specimen Req.:	1 mL serum (minimum 0.2 mL)
Tube / Container:	Red top tube
Setup Schedule:	
Transport/Storage:	Refrig.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	

Complement C3

Specimen Req.:	1 mL frozen serum (0.3 mL minimum)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Frozen
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	No hemolysis

Complement C4

Specimen Req.:	1 mL frozen serum (0.3 mL minimum)
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Frozen
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	No hemolysis

Complement Total, CH50

Specimen Req.:	1 mL frozen serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Frozen
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Copper, Serum

Specimen Req.:	2 mL serum (minimum 0.5 mL)
Tube / Container:	Royal Blue Trace Metal Tube
Setup Schedule:	Mon thru Fri

Transport/Storage:	Refrig.
Turnaround Times:	2-4 dyas
Reference Lab:	Quest Diagnostics
Comments:	

Cortisol, Free, Urine

Specimen Req.:	75 mL aliquot from well-mixed 24-hr urine collection
Tube / Container:	24 hr urine container collected with Boric Acid preservative
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Prednisone therapy will elevate results

Cyclosporin

Specimen Req.:	2 mL whole blood
Tube / Container:	Lavender (EDTA) tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	
Reference Lab:	Jewish Hospital Lab
Comments:	

DHEA, serum, Quantitative

Specimen Req.:	1 mL frozen serum (minimum 0.5 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon-Wed-Fri
Transport/storage:	Frozen
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	AM specimen preferred

DHEA-S

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	3 days
Reference Lab:	Quest Diagnostics
Comments:	

Dilantan, Free

Specimen Req.:	2 mL frozen serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Frozen
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	No SST tubes

DNA Antibody, Double Stranded, (Native)

Specimen Req.:	1 mL serum

Tube / Container:	Red top tube
Setup Schedule:	Tues-Thurs- Sat
Transport/Storage:	Refrig.
Turnaround Times:	2-5 days
Reference Lab:	Quest Diagnostics
Comments:	

Drug Screen, Abuse Panel 5

Specimen Req.:	30 mL random urine
Tube / Container:	Plastic vial
Setup Schedule:	
Transport/storage:	refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Drug Screen, Comprehensive, Urine

Specimen Req.:	25 mL random urine
Tube / Container:	
Setup Schedule:	Mon thru Sun
Transport/Storage:	Refrig.
Turnaround Times:	1-2 days
Reference Lab:	Quest Diagnostics
Comments:	

Drug Screen, Serum + Urine, STAT

Specimen Req.:	25 mL random urine plus 5 mL serum
Tube / Container:	Plastic vials
Setup Schedule:	24 hrs/day STAT
Transport/storage:	Refrig.
Turnaround Times:	4 hours
Reference Lab:	Quest Diagnostics
Comments:	

Drug Screen, Serum, STAT

Specimen Req.:	5 mL serum
Tube / Container:	Red top tube
Setup Schedule:	24 hours/day STAT
Transport/Storage:	Refrig.
Turnaround Times:	4 hours
Reference Lab:	Quest Diagnostics
Comments:	

Drug Screen Urine Abuse, STAT

Specimen Req.:	25 mL random urine
Tube / Container:	
Setup Schedule:	24 hrs / day STAT
Transport/storage:	Refrig.
Turnaround Times:	4 hours
Reference Lab:	Quest Diagnostics
Comments:	

Drug Substance Abuse Panel 10

Specimen Req.:	60 mL random urine
Tube / Container:	Plastic vial
Setup Schedule:	
Transport/Storage:	Refrigerate
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

EBV Comprehensive Panel, IgM, IgG

Specimen Req.:	l mL serum in plastic vial
Tube / Container:	Draw: Red top tube
Setup Schedule:	
Transport/storage:	Refrigerated
Turnaround Times:	3-5 days
Reference Lab:	Quest Diagnostics
Comments:	Cannot be performed on hemolyzed serum

Erythropoietin

Specimen Req.:	1 mL serum (minimum 0.3 mL)
Tube / Container:	Red top tube
Setup Schedule:	Mon-Wed-Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Estradiol, serum (17-beta)

Specimen Req.:	1 mL serum (0.3 mL minimum)
Tube / Container:	Red top tube
Setup Schedule:	Sun thru Sat
Transport/storage:	Refrig.
Turnaround Times:	2-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Factor V

Specimen Req.:	2 mL frozen citrated plasma
Tube / Container:	light blue citrate tube
Setup Schedule:	One a week, batched depending on quantity
Transport/Storage:	Frozen
Turnaround Times:	1-9 days
Reference Lab:	Quest Diagnostics
Comments:	

Factor VIII and/or IX

Specimen Req.:	1 mL citrated plasma per factor (0.3 mL per factor minimum)
Tube / Container:	Light blue citrated tube
Setup Schedule:	Mon-Fri
Transport/storage:	Frozen
Turnaround Times:	1-2 days
Reference Lab:	Quest Diagnostics

Comments:	Call Lab if needed STAT

Factor VIII Related Antigen (Von Willenbrand Factor)

Specimen Req.:	2 mL frozen citrated plasma
Tube / Container:	Light Blue citrated tube
Setup Schedule:	Mon-Thur
Transport/Storage:	Frozen
Turnaround Times:	2-7 days
Reference Lab:	Quest Diagnostics
Comments:	Send to lab on ice. Will be spun and frozen immediately

Factor V Leydin

Specimen Req.:	2 lavender top tubes
Tube / Container:	
Setup Schedule:	
Transport/Storage:	
Turnaround Times:	
Reference Lab:	Molecular Biology Lab, Brown Cancer Center, Rm 3E
Comments:	

FK506

Specimen Req.:	4 mL whole blood
Tube / Container:	Lavender tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Jewish Hospital Lab
Comments:	Investigational only

Flow Cytometry

Specimen Req.:	
Tube / Container:	
Setup Schedule:	
Transport/Storage:	
Turnaround Times:	
Reference Lab:	
Comments:	Special Collection, Call Lab 283-2167

Folate, RBC

Specimen Req.:	2 mL frozen EDTA whole blood * Must run HCT prior to freezing
Tube / Container:	Lavender EDTA tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Frozen
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	Must include HCT with specimen

Folate, serum

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Sat
Transport/Storage:	Refrig

Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

FSH, serum

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Fungal Serology (4)

Specimen Req.:	4 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/Storage:	Refrig
Turnaround Times:	3-7 days
Reference Lab:	Quest Diagnostics
Comments:	

Gastrin

Specimen Req.:	2 mL frozen serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Frozen
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	FASTING specimen required

GC by DNA Probe

Specimen Req.:	Endocervical or male urethral specimen
Tube / Container:	Gen-Probe Transport System
Setup Schedule:	Mon thru Fri
Transport/Storage:	Room Temp.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Obtain collector from Lab 283-2327, See Microbiology Collection- section 4

Glomerular Antibodies

Specimen Req.:	l mL serum
Tube / Container:	Red top tube
Setup Schedule:	Tues - Sat
Transport/storage:	Refrig
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	
Comments:	

Gonococcal Antibody, serum

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Sat
Transport/storage:	Refrig.
Turnaround Times:	3-5 days
Reference Lab:	Quest Diagnostics
Comments:	

Haptoglobin

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Heavy Metal Screen, Blood

Specimen Req.:	7 mL whole blood
Tube / Container:	Royal blue top trace metal tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	EDTA whole blood also acceptable (lavender top)

Heliobacter Pylori Serology, Qualitative

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Sun
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Heliobacter Pylori Serology, Quantitative

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Sun
Transport/storage:	Refrig
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Hepatitis B Core Antibody

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days

Reference Lab:	Quest Diagnostics
Comments:	

Hepatitis B Surface Antibody

Specimen Req.:	1 mL serum
Tube / Container:	Red to tube
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Hepatitis C Antibody

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Hepatitis C Virus (RNA), PCR, Qualitative

Specimen Req.:	2 mL frozen plasma
Tube / Container:	Lavender top tube, freeze within 4 hrs
Setup Schedule:	Mon thru Sat.
Transport/storage:	Frozen
Turnaround Times:	1-4 days
Reference Lab:	Specialty Lab
Comments:	

Hepatitis Profile including C

Specimen Req.:	5 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/Storage:	Refrig.
Turnaround Times:	3-10 days
Reference Lab:	Quest Diagnostics
Comments:	Component tests will be reported as preliminary as they are received.

Herpes Simplex 1 & 2, IgM

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	3-6 days
Reference Lab:	Quest Diagnostics
Comments:	

Herpes Viral Culture

Specimen Req.:	Lesion Swabs in VCTM
Refrig.	Viral/Chlamydia Transport Media - Get from Lab 283-2327
Setup Schedule:	

Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	other acceptable specimen: Urogential , Nasopharyngeal, eye and throat See Microbiology Collection - Section 4

HIV-1 RNA, PCR, Quantitative

Specimen Req.:	10 mL ACD-A whole blood
Tube / Container:	Yellow top ACD-A tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	Advantage One Lab
Comments:	

HLA 27

Specimen Req.:	10 mL ACD-A whole blood
Tube / Container:	Yellow top ACD-A tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Room temp.
Turnaround Times:	1-5 days
Reference Lab:	Quest Diagnostics
Comments:	Green top Sodium Heparin tube also acceptable, MUST BE ROOM TEMP.

IgE, Immunoglobulin

Specimen Req.:	1 mL serum
Tube / Container:	red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Impramine, (tofranil)

Specimen Req.:	5 mL serum
Tube / Container:	Red top tube, NOT SST
Setup Schedule:	
Transport/Storage:	Refrig.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	

Insulin

Specimen Req.:	1 mL frozen serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Frozen
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	Fasting Required

Lead, Blood

Specimen Req.:	3 mL heparin whole blood
Tube / Container:	Royal Blue Top Trace Metal Tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	EDTA whole blood also acceptable

Legionella, Culture

Specimen Req.:	Lower respiratory specimen
Tube / Container:	Sterile screw capped tune
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	See Microbiology Collection Section

Legionella, IgG, IgM, serum

Specimen Req.:	3 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri before 4 pm
Transport/Storage:	Refrig
Turnaround Times:	
Reference Lab:	Infectious Disease Lab
Comments:	

Legionella Pneumonia, DFA, Smear

Specimen Req.:	Lung tissue or aspirates, respiratory secretions
Tube / Container:	Air dried smears from aspirates or secretions. Tissue in sterile container
Setup Schedule:	
Transport/storage:	Room temp transport
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	See Microbiology Collection Section

Legionella Antigen, Urine

Specimen Req.:	60 mL random urine
Tube / Container:	Plastic vial
Setup Schedule:	Mon thru Fri before 4 pm
Transport/Storage:	Refrig.
Turnaround Times:	
Reference Lab:	Infectious Disease Lab
Comments:	

LH, Luteinizing Hormone, Serum

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Lidocaine, (Xylocaine), Quantitative

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube, NOT SST
Setup Schedule:	Mon thru Sun
Transport/Storage:	Refrig.
Turnaround Times:	1 day
Reference Lab:	Quest Diagnostics
Comments:	

Lupus Anticoaglant

Specimen Req.:	3 mL frozen citrated plasma
Tube / Container:	light blue top citrate tube
Setup Schedule:	Tues-Thurs
Transport/storage:	Frozen
Turnaround Times:	3-5 days
Reference Lab:	Quest Diagnostics
Comments:	Will be rejected if hemolyzed

Lyme Disease Antibody

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	
Reference Lab:	Infectious Disease Lab
Comments:	

Lyme Disease Confirmation by Western Blot

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	BBI
Comments:	

Lysozyme

Specimen Req.:	1 mL frozen serum
Tube / Container:	Red top tube
Setup Schedule:	Thurs.
Transport/Storage:	Frozen
Turnaround Times:	1-7 days
Reference Lab:	Quest Diagnostics
Comments:	

Metanephrines, Total, 24-hr urine

Specimen Req.:	25 mL of well-mixed 24-hr urine
Tube / Container:	24 hr urine collection with 30 mL 6N HCL at being of collection
Setup Schedule:	Mon thru Fri

Transport/storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	Obtain container with preservative prior to beginning collection - Lab 283-2327

Methylmalonic & Homcystic Acid

Specimen Req.:	3 mL serum , frozen
Tube / Container:	Red top tube
Setup Schedule:	Mon-Wed-Fri.
Transport/Storage:	Frozen
Turnaround Times:	2-6 days
Reference Lab:	Quest Diagnostics

Mexiletine

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube, NOT SST
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	Quest Diagnostics
Comments:	

Micro-Albumin, 24-hr urine

Specimen Req.:	25 mL aliquot from well-mixed 24-hr urine
Tube / Container:	24-hr urine
Setup Schedule:	Mon thru Sat
Transport/Storage:	Refrig.
Turnaround Times:	2-5 days
Reference Lab:	Quest Diagnostics
Comments:	No preservative, refrig. During collection

Mycoplasma IgG & IgM Titer

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri.
Transport/storage:	Refrig.
Turnaround Times:	
Reference Lab:	Infectious Disease Lab
Comments:	

Myoglobin, Serum, Quantitative

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Wed-Fri
Transport/Storage:	Frozen
Turnaround Times:	1-5 days
Reference Lab:	Quest Diagnostics
Comments:	

Neurontin, (Gabapentin)

Specimen Req.:	1.5 mL serum
Tube / Container:	Red top tube

Setup Schedule:	Mon thru Sat
Transport/storage:	Refrig.
Turnaround Times:	2-5 days
Reference Lab:	Quest Diagnostics
Comments:	Specimen will be rejected for hemolysis or lipemia

Newborn Screening

Specimen Req.:	Newborn Screening Card
Tube / Container:	Card with minimum of 3 circles filled correctly
Setup Schedule:	
Transport/Storage:	Room Temp.
Turnaround Times:	5-10 days
Reference Lab:	IU, Clarion Labs
Comments:	Must have card properly filled out, collection date, time , initials of collector, date/time of first protein feeding

Nortriptyline, (Aventyl), Quantitative

Specimen Req.:	3 mL serum
Tube / Container:	Red top tube, NO SST
Setup Schedule:	Mon thru Thurs
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	At least 12 hrs after dose

Phospholipid, (Cardiolipin), Antibody

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Sat
Transport/Storage:	Refrig.
Turnaround Times:	2-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Platelet Antibody

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	
Transport/storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Progesterone

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Prolactin

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Protein C Functional

Specimen Req.:	3 mL frozen citrated platelet-poor plasma
Tube / Container:	light blue citrate tube
Setup Schedule:	
Transport/Storage:	frozen
Turnaround Times:	4-5 days
Reference Lab:	Quest Diagnostics
Comments:	

Protein C Evaluation

Specimen Req.:	3 mL frozen citrated platelet-poor plasma
Tube / Container:	Light blue citrate tube
Setup Schedule:	Mon-Wed-Fri
Transport/storage:	Frozen
Turnaround Times:	1 wk-2 wks
Reference Lab:	Quest Diagnostics
Comments:	

Protein S Evaluation

Specimen Req.:	3 mL frozen citrated platelet-poor plasma
Tube / Container:	Light blue citrate tube
Setup Schedule:	
Transport/Storage:	Frozen
Turnaround Times:	4-5 days
Reference Lab:	Quest Diagnostics
Comments:	

PTH, Parathyroid Hormone

Specimen Req.:	3 mL frozen serum
Tube / Container:	Red top tube
Setup Schedule:	Tues- Sun
Transport/storage:	Frozen
Turnaround Times:	2-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Rast allergen

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	3-10 days
Reference Lab:	Allergy Testing Lab
Comments:	

Rifampin Sensitivity

Specimen Req.:	Special Order- Contact Microbiology 283-2327
Reference Lab:	University Lab

Schilling Test - See special instructions on Page 27 This Section

Sickle Cell Prep

Specimen Req.:	7 mL whole blood
Tube / Container:	EDTA lavender top tube
Setup Schedule:	Mon thru Fri, and Sun
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Preferred test is Hemoglobin Electrophoresis which is performed at Clark Memorial

Sinequan, (Doxepin)

Specimen Req.:	3 mL serum
Tube / Container:	Red top tube- NO SST
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Somatomedin-C

Specimen Req.:	1 ml frozen serum
Tube / Container:	Red top tube
Setup Schedule:	Tues thru Fri, Sun
Transport/Storage:	Frozen
Turnaround Times:	2-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Stone Analysis

Specimen Req.:	Stone
Tube / Container:	Plastic container
Setup Schedule:	referred Mon thru Fri
Transport/storage:	Room temp.
Turnaround Times:	
Reference Lab:	Beck Analytical
Comments:	

T3, Free (Free Triiodothyronine)

Specimen Req.:	2 mL serum

Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

T4, Free (Free Thyroxine)

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Testosterone, serum

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

THC, Urine (@100 or as specified)

Specimen Req.:	50 mL random urine
Tube / Container:	Plastic vial
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Contact lab if needed STAT, 283-2327

T-helper/inducer (CCBH)

Specimen Req.:	1 full yellow ACD-A yellow tube and 1 EDTA lavender tube & 1 air-dried smear
Tube / Container:	ACD-A yellow tube, and Lavender tube, whole blood, do not spin down
Setup Schedule:	Mon thru Fri
Transport/Storage:	Room temp.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	Do not refrigerate, send immediately

Thyroid Antibody Group

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3days
Reference Lab:	Quest Diagnostics
Comments:	

Torch Profile. IgG

Specimen Req.:	1mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Toxoplasma Antibody, IgG

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	M-W-F
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Transferrin

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

Varicella Zoster Antibody, IgG & IgM

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Tues thru Sat
Transport/storage:	Refrig.
Turnaround Times:	2-4 days
Reference Lab:	Specialty Lab
Comments:	

Viral Culture, General

Specimen Req.:	See Microbiology Collection in Sectin 4
Tube / Container:	VCTM media
Setup Schedule:	Mon thru Sat
Transport/Storage:	Refrig.
Turnaround Times:	varies
Reference Lab:	Quest Diagnostics
Comments:	See Microbiology Collection in Section 4

Viral Respiratory Panel

Specimen Req.:	Swab, washings , aspirate, etc.
Tube / Container:	VCTM
Setup Schedule:	
Transport/storage:	Refrig
Turnaround Times:	varies
Reference Lab:	Quest Diagnostics

Comments:	Use only dacron rayon-tippped or cotton swabs on metal or plastic shafts See Microbiology collection section 4

Vitamin B12

Specimen Req.:	1 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/Storage:	Refrig.
Turnaround Times:	1-4 days
Reference Lab:	Quest Diagnostics
Comments:	

Vitamin B12 and Folate

Specimen Req.:	2 mL serum
Tube / Container:	Red top tube
Setup Schedule:	Mon thru Fri
Transport/storage:	Refrig.
Turnaround Times:	1-3 days
Reference Lab:	Quest Diagnostics
Comments:	

VMA, 24-hr urine

Specimen Req.:	75 mL urine from well-mixed 24 hr urine collection
Tube / Container:	plastic container
Setup Schedule:	Mon-Wed
Transport/Storage:	Refrig.
Turnaround Times:	5-10 days
Reference Lab:	Quest Diagnostics
Comments:	Obtain container from lab with 30 mL 6N HCL prior to collection

Zarontin. Quantitative

Specimen Req.:	3 mL serum
Tube / Container:	Red top tube, NOT SST
Setup Schedule:	Mon-Wed
Transport/storage:	Refrig.
Turnaround Times:	3-5 days
Reference Lab:	Quest Diagnostics
Comments:	

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AREA: Laboratory	
DEPARTMENT: Lab DOS Manual	WRITTEN BY Leann Lawrence MT(AMT)
Original effective date 01/01/2014	APPROVED BY / EFFECTIVE DATE: Kelly Z. Brown, MD Laboratory Medical Director (signature on file)
Procedure Manual review by Medical Director or designee is documented on the ñREVIEW OF PROCEDURESò page at the front of the manual.	

SPECIMEN COLLECTION - MICROBIOLOGY

Part I

MICROBIOLOGY SPECIMEN COLLECTION AND TESTING

General Information

The proper collection, handling, and prompt culturing of specimens (within one hour of collection is preferred) for microbiology are imperative for meaningful diagnostic reports. Please refer to this manual or call the Microbiology Department at extension 5868, if there are any questions.

SPECIMEN LABELLING

All specimens must be labeled with two unique patient identifiers. Acceptable identifiers include patient name, medical record number, date of birth, or social security number. A room number is not an acceptable patient identifier. Specimens with inadequate patient identifiers will be rejected. All specimens should indicate the date, time, and the initials of the person who collected it on the specimen container and/or requisition. All cultures should include the source and specific site of the specimen, and when appropriate, type of infection and/or organism expected.

SPECIMEN REQUISITONING

Requests for all cultures -Routine, Acid-fast (AFB, TB) or Mycology (fungus)- must be ordered through the computer. During a scheduled or unscheduled computer downtime, all specimens must be accompanied by a Downtime Form. Precise records of each specimen must be kept on the floor during computer downtime.

SPECIMEN TRANSPORT

Most specimens held for more than two (2) hours, at room temperature, are unsuitable for culture. See individual procedures and charts below for specific information on transport times. If delivery is delayed, the use of transport media and/or refrigeration is imperative (see individual procedures for specifics). Specimens should be in tightly sealed containers with no external spillage. Specimens with external spillage will be rejected. All microbiology specimens should be double-bagged in biohazard bags before transport to the lab

All specimens collected within the hospital (Outpatient, OR, ED, and the inpatient units) may be tubed via the pneumatic tube to the laboratory. Blood Cultures MUST be tubed in specifically designated padded tubes. A call to Microbiology should precede the tubing of critical

specimens/tests (i.e. OR stats). This call would alert the techs to investigate should the specimen not arrive promptly.

Specimens may also be hand-delivered to the processing area in the front of the lab. If the specimen is critical or the test is ordered STAT a lab team member should be alerted.

Do not transport material for culture in a needle and syringe.

GENERAL REJECTION CRITERIA

1. Specimens with missing or inadequate patient identifiers will be rejected.
2. Specimens with external spillage will be rejected.
3. See individual specimen types/culture orders for specific rejection criteria.

Acid-Fast Cultures (AFB, TB)

LIS CODE ï AFBCU

SPECIMEN SOURCES ï Any respiratory specimen, tissue, bone marrow, blood, urine.

COLLECTION GUIDELINES-
Sputum- see Sputum Collection Guidelines listed under ñSputumò below.
Bone marrow, blood ï see procedures ñBlood for AFB, MACò and ñBone Marrowò below.

The specimen MUST be received in a SEALED LEAK PROOF CONTAINER.
Transport to lab within one hour of collection.
Refrigerate (2- 8 C) specimen if transportation must be delayed. The specimen may be refrigerated for up to 24 hours.

COLLECTION CRITERIA:
Three sputum specimens for acid-fast culture and smear are recommended for patients with clinical and chest x-ray findings compatible with tuberculosis.

Three samples should be collected over an 8-24 hour period of time and should include at least one first morning specimen.

AFB cultures on sputum are not subject to evaluation criteria and will therefore not be rejected.

REJECTION CRITERIA
NOTE: 24 hour collection of urine or sputum is not appropriate for acid fast culture or smear.

RESULTS
Smears:

1. Smears from the concentrated source will be made and reported within 24 hours following receipt of the specimen in the laboratory. (First shift only)

2. Positive smears are considered ñcriticalò and will be called immediately.

Cultures:
Negative preliminaries are issued weekly with final negative results issued at approximately 5 ï 6 weeks.

Positive cultures are considered ñcriticalò and will be called immediately

NOTE:
Positive Cultures are automatically sent to a reference lab to differentiate between Mycobacterium tuberculosis and other species. Tests positive for M. tuberuclosis are then sent to Indiana State Department of Health. AFB antibiotic susceptibilities are performed on all new cases of Mycobacterium tuberculosis at the State Department of Health.

DNA probes on direct specimens may be sent to a reference lab, per physician request on **smear positives only**.

Reference
Clinical Microbiology Procedures Handbook 3rd edition. 2010.

Antibiotic Sensitivities

Sensitivities are not ordered individually, but are performed on appropriate isolates.
(Final results-varies but generally between 48-72 hours)

1. Antibiotic sensitivities are not performed on normal flora, but will be performed if possible on any significant isolate, with the exception of fungi, anaerobes and mycobacteria. Sensitivities on these organisms (if available) must be by special request only and will be sent to reference laboratories.
2. In general, sensitivities on urine cultures will be routine when the colony count is over 50,000 col/ml of a pure culture. On catheterized urine or pediatric urine specimens if the colony count is greater then 10,000/ml sensitivity will be performed, if possible. In addition, the urinalysis results will be considered as well. Special cases must be called to attention at the time of the culture request.
3. The Microbiology Department has fixed panels of antibiotics correlated to organism and source. The CLSI Guidelines are strictly adhered to concerning antibiotic/organism reporting. If a particular antibiotic is to be tested in an individual case, please request the antibiotic when ordering cultures.
4. Antibiograms are performed yearly, approved by the Infection Prevention Committee, and are available in the Microbiology Department.
5. Certain organisms are not viable or have no standards for sensitivity. In these cases, ñpreferred therapyò comments from the latest CLSI (formerly NCCLS) resources will be added to the report.

Reference
Clinical Microbiology Procedures Handbook 3rd edition 2010.

ANAEROBIC CULTURE

(ANAEROBIC SPECIMEN COLLECTOR)
Anaerobic culture does not need to be ordered separately or individually, all appropriate sources will be tested for anaerobes. Collected by nursing or physicians. Send to lab ASAP.

COLLECTION/TRANSPORT
Transport time depends on the volume and nature of the specimen. In general specimens transported in anaerobic transport are acceptable for 2-3 hours after collection. Aspirated material, tissue or biopsy material (not in transport) should be processed in the laboratory within 30 minutes.

Extreme heat or cold should be avoided. If delays are unavoidable, hold the specimen at room temperature until processing.

Do not transport material for culture in the needle and syringe.

HOW TO USE:
1. Peel apart package.
2. Collect specimen on swab or if liquid specimen, transfer aseptically to the small inner tube.
3. Replace swab and push down gently on plastic plunger forcing inner glass tube into larger glass.
4. Transport specimen to the Lab as soon as possible. (< 2 hours)

DO NOT USE IF:
1. Package is opened or damaged.
2. Indicator tablet in bottom is pink.
3. Stopper has been removed.

ATYPICAL PNEUMONIAE PCR PANEL

LIS Code - APP
(Mycoplasma pneumoniae, Legionella pneumophila, Chlamydia pneumoniae by PCR)

Sources ï bronchials, throats, nasal washes, NOT sputum

Throat, (oropharyngeal), swabs must be collected with Dacron-tipped, plastic-shafted (copan flocked if available) swab, (NO *wooden* shaft swabs) and placed immediately in a viral transport Media which is supplied from the reference laboratory. Call the laboratory prior to collection and the appropriate collection materials will be sent to the nursing unit.

Bronchial (BAL) specimens and nasal washes are also acceptable and require 5 ml of fluid. Bronchial specimens are submitted directly to the microbiology department unless there is a very small amount of specimen, may be submitted in a sterile tube. For small specimen quantities they may be added to the M4 Transport media.

Specimens should be maintained at transported at 4 C.
After collection, send to the laboratory ASAP. The specimen is sent to Infectious Disease Laboratory in Louisville and if received before 12 noon on Monday through Friday, results will be available in approximately 24 hours. The laboratory is closed on weekends and holidays.

REFERENCE:
Infectious Disease Laboratory Testing Menu, Feb 2010.

BLOOD CULTURES

LIS Code - BC
RESULTS
Preliminary results will be issued for negatives at 48 hours
Final results for negatives approximately 5 days)

Prelims will be issued and called immediately on positives blood cultures, timing varies)

INTRODUCTION

All blood cultures are collected by trained personnel. All blood cultures must have a recorded site of collection on the label. All reports must have the source of the draw recorded.

Number of blood cultures
The physicianôs orders regarding number of blood cultures should always be followed, but the usual recommendation is 2 or 3 with the best practice being 2.

NOTE: If blood MUST be obtained through IV lines or similar access devices, it should be paired with another culture from a peripheral venipuncture.

Volume of blood
Due to sporadic organism distribution in the blood, larger samples have been shown to significantly increase the likelihood of detection. However the automated blood culture machine supports the use of adult specimens as small as 1-5 ml and pediatric specimens of 0.1 - 3 ml. However a minimum of 0.5 ml of blood is recommended for recovery of Haemophilus influenzae and Neisseria species.

Blood Volumes and Bottle Selection

- Draw both an aerobic (purple/silver) and anaerobic (red) bottle for each culture ordered.
- Do NOT overfill the bottles. This can cause false positive results.
- When inoculating with a syringe, split the draw evenly between the aerobic and anaerobic bottles.
  NOTE: If a sufficient sample cannot be obtained to inoculate both bottles, inoculate the aerobic bottle (silver/purple)
- Minimum volume to be inoculated into each bottle is 0.5 ml
- Maximum volume to be inoculated into each bottle is 5 ml.

LOW VOLUME DRAW should be distributed as follows:

- Greater than 1 ml: divide equally between aerobic and anaerobic bottles.
- Less than one ml but greater than0.5 ml: inoculate 0.5 ml into the aerobic bottle (blue), and inoculate the remainder into the anaerobic bottle (red).
- Less than 0.5 ml: inoculate entire amount into the aerobic bottle (blue).

Timing Guidelines:
The physicians orders regarding blood culture timing and number should always be followed, since the clinical status of the patient is the primary guide to the timing of blood cultures.

NOTE: If the physician does not specify timing, *blood should be collected from two **different sites, one right after the other** following the clinical event that precipitated the order. If only one site is available, two different venipunctures must be performed.*

Specific recommendations:

Condition or syndrome	Timing Recommendations
Suspected acute primary Bacteremia or fungemia Meningitis, osteomyelitis Arthritis or pneumoniae	obtain 2 or 3 blood cultures, one right after the other from different sites following the clinical events that precipitated the order of the blood cultures.
Fever of Unknown Origin (occult abscesses, typhoid fever, brucellosis, or other febrile syndrome	obtain 2 or 3 blood cultures, one right after the other from different sites initially, if these are negative after 24-48 hours of incubation, obtain 2 more blood cultures one right after the other, from different sites.

Suspected bacteremia or Fungemia with persistently Negative blood cultures	consider alternative blood culture methods designed to enhance recovery of mycobacteria, fungi, and rare or fastidious microorganisms.

Special considerations

Acute infective endocarditis: Obtain blood cultures within a 30-minute period before administration of antibiotics.

Subacute infective endocarditis: Obtain blood culture sets with the sets spaced 30 minutes to one hour apart. This may help document a continuous bacteremia.

Intervals may help to document other endovascular event (e.g. catheter related infections)

SPECIAL NOTE:
For pediatric patients: Collect a single culture set immediately, unless otherwise specified. It is rarely necessary to document continuous bacteremia with hours between cultures.

Proper labeling:
All blood cultures must be labeled with two unique patient identifiers. Acceptable identifiers include patient name, medical record number, date of birth, or social security number. A room number is not an acceptable patient identifier. Specimens with inadequate patient identifiers will be rejected. All blood cultures should also be labeled with the specific site of collection (which vein, which arm, time drawn etc).

Transport to Laboratory
Note: Blood cultures must be transported to the lab ASAP and placed in the blood culture machine ASAP. Do NOT refrigerate.

EQUIPMENT

- Sterile 12 cc syringe with safety needle and sterile transfer device OR
  Vacutainer® needle with disposable tube holder (ñhubò) OR
  Butterfly with disposable tube holder (ñhubò)
- 1 Anaerobic bottle (red)
- 1 Aerobic bottle (silver/purple)
- Alcohol prep pads
- Blood culture prep kit (ChloraPrep® One-Step Kit OR Septi-Seal® Prep Kit II, depending on patient)

PREPARATION OF SITE

Chloraprep One-Step Kit
Contains one Frepp® (sponge). This kit MUST NOT be used on infants two months of age or younger.

1. Remove Frepp from kit, hold Frepp by center of handle in horizontal position with foam surface down.
2. Pinch handle to break ampule. DO NOT CONTINUE TO SQUEEZE HANDLE
3. Apply foam surface to area to be cleansed.
4. Depress foam against surface once or twice to saturate foam.
5. Cleanse area thoroughly for 30 seconds.
6. Allow to dry.

7. DO NOT TOUCH SITE AFTER CLEANING. If the vein should need to be relocated before performing venipuncture, the palpating finger must be prepped in the same manner in which the patientõs arm was cleansed.

PEDIATRIC PATIENTS
For pediatric patients, omit the iodine step and clean two additional times with separate preparation pads saturated with 70% isopropyl alcohol or ethyl alcohol 2%.

PREPARATION OF CULTURE BOTTLES

1. Clean tops of bottles with clean, unused **alcohol** prep pads.
2. Place bottles on a flat surface.
3. Take care not to touch or contaminate the newly cleaned bottle tops.

COLLECTION PROCEDURE

Using a syringe:
1. Obtain venous access using syringe and needle at the cleaned site.
2.Remove the needle from patients arm.
3. Activate the safety needle and remove.
4. Attach a sterile transfer device to inoculate the blood culture bottles.
5. Fill the blood culture bottles before filling tubes for other tests.
6. Remove the syringe and needle immediately when the blood flow into the bottle slows. It is imperative that the bottles not be overfilled, as overfilling may cause false positive results.

Using a Vacutainer® needle:
1. Attach a disposable holder (ñhuboò) to the end of the Vacutainer.
2. Obtain venous access at the cleansed site.
3. Attach the culture bottles before filling tubes for other tests.
4. Remove the stopper-puncturing needle when blood flow into the bottle slows. It is imperative that the bottles not be overfilled, as overfilling may cause false positive results.

Using a Butterfly needle:
1. Attach a disposable holder (ñhuboò) over the rubber-coated needle.
2. Obtain venous access at the cleaned site.
3. Attach the culture bottles before filling tubes for other tests.
4. Remove the stopper-puncturing needle when blood flow into the bottle slows. It is imperative that the bottles not be overfilled, as overfilling may cause false positive results.

Reference
Manual of Clinical Microbiology, 8th edition, Murray et al.

2003Trek Diagnostics Systems Technical Product Insert, 2003.

Cumitech IC Blood Cultures IV 2005.

BLOOD CULTURES FOR AFB, MAC, and/or FUNGUS

LIS Code- BCAFB (blood culture for AFB or MAC)
LIS Code- BCMYC (blood culture for fungus, mycology)

SOURCES- Blood

BCAFB is occasionally requested as Blood Culture for MAC, which is Mycobacterium Avium Complex.

1. Collect 1 yellow top tube with SPS (available in Micro) for each culture ordered.
2. The physician should specify the timing of the draws.
3. Send to the Microbiology Department within 2 hours.

RESULTS
Prelims weekly
Final results - 5-6 weeks for AFB and 4-6 weeks for fungus.
Positives preliminaries will be issued and results called immediately.

Reference
2003Trek Diagnostics Systems Technical Product Insert, 2003.

BONE MARROW (AFB, Mycology, Routine Culture)

COLLECTION AND TRANSPORT

1. Specimens are collected by physician.
2. Technologist inoculates media at bedside; a cooked meat for routine cultures, yellow top with SPS for AFB and Fungus. (see above procedure)
3. Make 3 smears at bedside according to standard hematology practices.
4. Deliver to Microbiology within 2 hours at room temperature.

RESULTS
Prelims sent at 24 hours, final results vary but generally 72 hours for routine culture.
AFB and mycology - 5-6 weeks for AFB and 4-6 weeks for fungus

Reference
Clinical Microbiology Procedures Handbook 3rd edition, 2010.

BORDATELLA PERTUSSIS by PCR

LIS Code - BPPCR
(DFA is no longer available.)

SPECIMEN (PCR)

1. Collect Nasopharyngeal washing or NP (nasopharyngeal) swab. Refer to instructions under Nasopharyngeal Washings or NP swab collection.

NOTE: NP swabs collected for Bordetella Pertussis PCR MUST be collected using DACRON swabs.

2. Transfer washing into a sterile screw cap tube. Tubes may be obtained from Lab.
3. Specimen will be referred to NKC by cab or courier.

SPECIMEN (Bordatella Pertussis Culture)

1. Use Nasopharyngeal swab (see collection of Nasopharyngeal Swab.)
2. Inoculate Regan Lowe tube agar media.
3. Send to NKC by cab or courier, as soon as possible.

Reference
Norton Kosair Children's Hospital, Microbiology Department, Dr. Buck, Sept. 1997.

BRONCHIAL FLUID or BAL

COLLECTION AND TRANSPORT

1. Collected by physicians in Surgery. Label specimens specifically, (ie, BAL, bronchial washing, right upper lobe etc).
2. Usual orders include: routine culture, AFB, Fungus, a variety of reference lab tests and accompanying smears. All tests should be ordered separately. See posted test requirements for reference lab tests. See individual listings for instructions.
   NOTE: Specimens from the same lung/site will be mixed together for the reference lab testing on a routine basis. The physician must specifically request that each individual specimen (i.e. BAL right lower lobe and bronchial wash right lower lobe) be submitted for reference lab testing. In-house testing (routine culture, AFB, Mycology and stains will be processed individually.
3. Must be ordered in computer under each separate test, with the ñDepartment of Anatomic and Clinical Pathology Surgical & Cytology (Non-Gyn) Requisition. **
4. Transport to Microbiology ASAP (within 1 hour at room temperature) with the above mentioned form.

**PLEASE INDICATE ON FORM THE NUMBER OF CONTAINERS SUMBITTED, CHECK EACH TEST REQUESTED AND MARK IF BOTH MICROBIOLOGY AND PATHOLOGY/CYTOLOGY ARE INDICATED.

RESULTS

Routine Culture:(Prelims- 24 hours, Finals varied but 48-72 hours depending on organisms isolated. AFB and mycology - 5-6 weeks for AFB and 4-6 weeks for fungus

Reference
Manual of Clinical Microbiology, 8th edition, Murray et al. 2003.

CATH TIPS

LIS- order ROUCU (routine culture and enter source as cath tip, and site as specific type)

SOURCES- IV TIP, CATH TIP

SITES: (specific type of catheter) central, CVP, Hickman, Broviac, peripheral, arterial, umbilical, hyperalimentation, swan-ganz.

1. Cleanse the skin around the catheter site with alcohol.
2. Aseptically remove catheter and clip 2- 3 cm of the distal tip directly into sterile container.
3. Transport immediately to microbiology laboratory (preferably within 15 minutes, (no longer than 2 hours) at room temperature to prevent drying.

NOTE:
1. Foley cath tips should not be cultured since growth represents distal urethral flora.
2. Intravascular catheter tips should be accompanied by concurrent blood cultures to aid in determining the source of a bacteriemia.

RESULTS
Prelims in 24 hours, final results vary but usually 72 hours depending on organisms isolated

Catheter tips are cultured using the Maki method and will be reported out as
No Growth, <15 colonies,
Or
15 colonies with the accompanying organism(s) and sensitivity if applicable.

Reference
Clinical Microbiology Procedures Handbook, 3rd edition. 2010

CLOSTRIDIUM DIFFICILE (Antigen/Toxins A/B, or Culture)

C. Difficile Antigen/Toxin ï Performed by CMH Lab, screens for both toxins A
And B but does not distinguish between them.

TESTS/SPECIMEN
stool sample submitted to lab in denture/urine cup

REJECTION CRITERIA :
1. The test will be rejected if the specimen is NOT watery, loose, or unformed
Exception : if ileus is suspected, contact the Microbiology Department.

2. Since this test is not recommended as a test of cure, once a positive antigen and toxin result is obtained, no repeat testing will be performed on the same admission barring extenuating circumstances.

3. Because of the high negative predictive value, negative C. difficle tests do not generally need to be repeated, thus only one test per 24 hours may be performed with a maximum of two tests in a seven day period.

COLLECTION/TRANSPORT
1. Transport stool sample ASAP to laboratory. Specimens may be stored between 2 and 8 C for up to 24 hours prior to C. difficile testing.
2. Do NOT freeze samples.
3. Specimens preserved in 10% formalin, Merthiolate formalin, sodium acetate formalin or polyvinyl alcohol cannot be used.
4. The test should be discouraged or interpreted with caution in patients <1 year old since up to 50% of healthy infants may test positive for C. difficle toxin.

RESULTS
C. diff antigen/toxin - Final results within 4-8 hours, 1 hour for stat)

For C. Difficile Culture (Reference Lab Test)

1. The stool specimen should be collected the same as for a routine culture (stool or denture cup), and brought to the Lab within one hour of collection. Notify lab personnel when delivering this specimen.
2. Label the specimen and send with the request form.

3. The specimen must be refrigerated as soon as collected. It should be transported to the lab ASAP, but within 1 hour for culture.
4. Lab personnel will transfer a portion of the specimen into anaerobic collector for referral of the culture to an outside reference lab. Ship at room temperature.

REFERENCE
Wampole Toxin A/B Quik Check, Technical Product Insert 2/2009

Clinical Microbiology Procedures Handbook, 3rd edition. 2010.

Quest Directory of Services 2010

CERVICAL AND URETHRAL COLLECTION PROCEDURE

Various tests (i.e. Chlamydia, GC Culture, Herpes Culture, Trichomonas, and KOH Wet Prep; each test requires specific collection materials, see individual listings below). The specific site must be noted on all orders.

NOTE: DO NOT USE WOODEN SWABS

CERVICAL SWAB SPECIMENS

COLLECTION PROCEDURE(see specific test requested for detailed collection materials)

1. Remove excess mucus from the cervical os and surrounding mucosa using a non-, wooden swab.(swab must be specific for test ordered) Discard the first swab.
2. Insert the second swab into the endocervical canal.
3. Rotate the swab for 10-30 seconds in the endocervical canal, past the squamocolumnar junction, until most of the tip is no longer visible to ensure adequate sampling.
4 Withdraw the swab carefully. Avoid contact with vaginal mucosa.
5. Use separate appropriate swabs for different tests ordered. (i.e. GC culture, Chlamydia, Trichomonas.
6. Insert the swab into the appropriate (see individual test) transport container. Label the tube with the patient's name, date and time of collection, and send to lab within one hour.
.

URETHRAL SWAB SPECIMENS

COLLECTION PROCEDURE**(**see specific test requested for detailed collection materials)

1. Patient should not have urinated for at least one hour prior to sample collection.
2. Collect the urethral exudate or insert the tube swab from the urethral collection kit 2-4 cm into the urethra using a rotating motion to facilitate insertion.
3. Once inserted, rotate the swab gently using sufficient pressure to ensure the swab comes into contact with all urethral surfaces. Allow the swab to remain inserted 2-3 seconds.
4. Withdraw the swab.
5. Insert the swab into the appropriate (see individual) transport tube.
6. Cut the swab shaft to fit the tube and cap the tube.

7. Label the tube with the patient's name, date and time of collection, and send to lab within one hour.

TRANSPORT
Transport genital specimens at room temperature within 1 hour. DO NOT refrigerate.

REFERENCES
Quickview Technical Product Insert. 2011

Quest Directory of Services 2013

CHLAMYDIA

Different methodologies are routinely available depending on specimen source. Obtain media and special swabs from Lab

CHLAMYDIA ANTIGEN **LIS CODE – CHLAG (performed by CMH Micro Lab)**

Endocervical specimens will be performed on all three shifts with a turn-around-time of 1 hour.

NOTE: In house Chlamydia antigen testing should not be performed for sexual abuse or any medicolegal case.

Specimen Collection/Materials

Swab specimens for the Chlamydia antigen assay **must** be collected with the Chlamydia Transport swabs unique to this test which are supplied by the laboratory. See ñCervical Collection Procedureò above for specimen collection information. Proper sample collection is extremely important. The specimen should contain as many columnar epithelial cells as possible.

Rejection Criteria

1.Any specimen other than endocervical sample.
2.Any specimen NOT collected in appropriate collection swabs.

Chlamydia Culture: ***LIS Code - CHLCU*** **(reference lab)**

TAT ï minimum of 1 week.
Sources - male urethral, endocervical, conjunctiva, rectal mucosa, fluid, tissue, nasopharynx or throat, bronchials.

Specimen Requirements

Requires Viral Chlamydia Transport Media media stored in lab refrigerator and special dacron rayon swabs (supplied by lab) For child abuse, rape, or any medicolegal cases, Chlamydia Culture is the recommended ñgold standardò WOODEN SHAFT and CALCIUM ALGINATE SWABS will be rejected. Transport to lab ASAP. See sources for proper collection techniques.

Rejection Criteria

1.Wooden shaft and calcium alginate swabs will be rejected. Only specific unique swabs obtained from Microbiology will be accepted due to invalidity of test results when other swabs are used.

CHLAMYDIA DNA by PCR – LIS code – CHLP (reference lab)

This test is a DNA genetic probe, which uses Strand Displacement Amplification methodology. BD Probe Tech Collection materials (supplied by Microbiology) MUST be used.
TAT - < 5 days **Sources** ï urine, urethral swab, endocervical or vaginal swab

Specimen requirements

Urine: (male or female)

Patient should not have urinated for at least 1 hour. Collect the specimen in a sterile, preservative-free collection cup. The patient should collect the first 20-60 ml of voided urine (the first part of the stream-not midstream) into a urine collection cup. Urine should be transferred

from the collection cup to one Q UPT (Urine Preservative Transport Q) within 8 hours of collection provided the urine has been stored at 2-30C. The correct vlume of urine has been added when fluid level is in the fill window. This volume corresponds to 2-3 ml of urine. Invert the Q UPT 3-4 times to mix. Do not overfill the tube.

Male urethral:
Submit swab in BD Probe Tec CT/GC Q Amplified Assay Collection Kit for male urethral specimens. Break swab at score mark and cap tightly, Do not cut swab.

Vaginal/ Endocervical:
Submit swab in BD ProbeTec CT/GC Q Amplified DNA Assay Collection Kit for vaginal or endocervical specimens. Twist cap to break seal and remove cap with attach swab. After collection return swab to tube and cap tightly.

Transport temperature- room temperature

Rejection Criteria- any specimen other than urine NOT received in BD probe tec Collection/Transport.

REFERENCES

Quickview Technical Product Insert. 2011
Quest Directory of Services 2013

CEREBROSPINAL FLUID (Physician Collected)

LIS Code ï CSFCU (routine culture CSF)

COLLECTION AND TRANSPORT

1. Prepare the skin as for surgery, and take in 3 successive sterile screw cap tubes. The minimum amount necessary for culture, gram stain, and antigen testing is about one ml.
2. Microbiology studies are preferably performed on tubes 2 (Routine culture, gram stain, viral culture cryptococcal antigen, fungal culture and smear) and/or 3 (AFB culture and stains). If only one tube is collected, submit to Microbiology first.
3. Bring to the Microbiology Department within 15 minutes. Do NOT refrigerate prior to routine culture.

RESULTS

**Centrifuged specimens are used for cultures and wet preps when ordered. CSF specimens are cytospun for stains.

Prelims sent at 24 and 48 hours, Finals vary, but generally 72 hours

Any positive finding is considered a critical value and will be called to the floor immediately.

REFERENCES

Clinical Microbiology Procedures Handbook, 3rd edition. 2010.

CONJUNCTIVA CULTURE (Eye)

LIS Code ï ROUCU (order routine culture, enter eye, as source, conjunctia, corneal scraping etc. and right or left as site.)

COLLECTION AND TRANSPORT (culture swab)

1. With the thumb, pull down the lower eyelid; hold the upper lid with the forefinger to prevent blinking.
2. Collect the specimen by rotating transport swab over the conjunctiva to obtain exudate if present.
3. If there is no exudate, the physician can take a scraping.
4. The specimen should kept at room temperature until transport to laboratory, within 2 hours.

CORNEAL SCRAPINGS

1. Specimen is collected by the ophthalmologist.
2. The specimen should be directly inoculated onto blood agar, chocolate agar, saboraud dextrose agar and a broth medium.
3. Gram stains should be made by rubbing material onto slide at site of collection.
4. Transport to microbiology at room temperature within 15 minutes.

RESULTS
Prelims-24-48 hours, final results varies, but generally 72 hours

REFERENCES
Manual of Clinical Microbiology 8th edition, Murray et al. 2003.

EAR CULTURE

LIS Code ï ROUCU (Order for routine culture, enter EAR as source and right or left as site)

COLLECTION AND TRANSPORT (culture swab)
Inner Ear (physician collected)

1. For intact eardrum, clean ear canal with soap solution and collect fluid via syringe aspiration technique.
2. For ruptured eardrum, collect fluid on flexible shaft swab via an auditory speculum.
3. Transport to lab within 2 hours at room temperature.

Note: Results of throat or nasopharyngeal swab cultures are not predictive of agents responsible for otitis media and should not be submitted for that purpose.

Outer Ear

1. Use moistened swab to remove any debris or crust from the ear canal.
2. Obtain a sample by firmly rotating the swab in the outer canal.
3. Transport in culturette to the microbiology department with in 2 hours at room temperature.

RESULTS
Prelims ï 24 hours, final results vary but usually 48-72 hours.

FECAL LEUKOCYTES (See Stool for WBC, below)

FLUID CULTURE - (Physician Collected)

LIS Code ï FLCUL (for routine fluid culture, enter specific fluid type for source and or site)

SOURCES include (but not limited to): abdominal, amniotic, ascites, bile, FNA aspirates joint, paracentesis, pericardial, peritoneal, pleural, synovial, thoracentesis etc. Indicate on requisition specific fluid submitted.

NOTE; ENTER SPECIFIC SOURCE AND SITE (example- source ï fluid, site- pleural)

PROCEDURE

1. Disinfect overlying skin with iodine preparation and collect as appropriate for source.
2. DO NOT send the first few ml for culture. Always submit as much fluid as possible; Do NOT submit a swab dipped in fluid.
3. Put 10-30 ml in a sterile screw cap tube for culture or if anaerobes are suspected (always for amniotic fluid) use anaerobic transport in addition to fluid in sterile screw cap tube.

4. Transport immediately to the lab at room temperature within 15 minutes. DO NOT REFRIGERATE prior to culture.
5. Do NOT submit the needle to the laboratory with FNA aspirates.

RESULTS
(Prelims-24-48 hours, final results varies, but generally 72 -96 hours)

All fluids except amniotic will be centrifuged for culture and cytospun for gram stains, unless they are extremely thick and purulent. Another exception would be aspirates such as a FNA (fine needle aspirate) where there is insufficient volume for centrifugation.

REFERENCES
Clinical Microbiology Procedures Handbook 3rd edition, 2010

FUNGUS (MYCOLOGY), SKIN SCRAPINGS

LIS Code - MYCCU (for Mycology culture, enter source and specific site, i.e. arm, left)
KOH or MYSMR (for Mycology smear on skin scrapings)

COLLECTION AND TRANSPORT

1. The affected area is prepared by swabbing with a sponge soaked in 70% alcohol.
2. Washing serves to remove dirt particles and any medication that would make microscopic examination difficult.
3. After drying, the lesion is scraped with a sterile scalpel.
4. The scrapings are placed in a sterile container and taken to the laboratory.
5. In piedra infection of the hair or the scalp and beard, hairs are clipped from areas involved and taken to the laboratory for processing. Fingernails and toenails may be clipped (from the deeper infected portion of the nail) and sent to Microbiology in a sterile container.
6. A KOH (potassium hydroxide) prep is done on all skin scrapings.
7. Skin scrapings may be collected by the Microbiology Department during first shift, on Outpatients only. Inpatient samples will be collected by Nursing.
8. See specific specimen source for all other fungal (Mycology) culture directions. Most are collected and transported in the same manner as bacteriology cultures. Exceptions will be noted.

RESULTS
Prelims will be sent weekly, final results 4-6 weeks)

REFERENCES
Manual of Clinical Microbiology, 8th edition, Murray et al. 2003.
Reference GI Supply Technical Product Insert, 2003.

INFLUENZAE A & B

LIS Code ï INAB

SPECIMEN: fresh nasal washings, nasopharyngeal (NP) or nasal swabs

COLLECTION
See collection procedures that follow (NASALS, NASAL WASHINGS, and NASOPHARYNGEAL) for specific techniques.

Use cotton, rayon, foam or polyester flexible-shaft NP swabs to collect NP swabs and cotton, rayon, foam or polyester solid shaft swabs to collect nasal swabs. Calcium alginate swabs are not recommended for use in this test.

Nasal washes may be held at 2-8 C for up to 24 hours but swabs must be sent to the lab within one hour of collection.

LIMITATIONS:
Due to low levels of virus shedding, a negative test result does not exclude infection with influenzae A or B. Therefore the results obtained should be used in conjunction with clinical findings to make an accurate diagnosis.

This test detects both viable and non-viable influenzae A and B. The test performance depends on viral load and may not correlate with the culture performed on the same specimen.ô

RESULTS
Routine orders will have a turnaround time of four hours and stat orders will be resulted within one hour.
Reference:
Binax Now and Wampole Laboratories Technical Product Inserts. 2004.

LEGIONELLA (CULTURE & DFA)

LIS Code ï LEGDF, LEGCU

SPECIMENS**:** Bronchial, Tracheal, and Sputum

COLLECTION/TRANSPORT
Submit 1 ml respiratory specimen in appropriate sterile container (see Sputum Culture). Specimen will be sent to reference lab. Refrigerate and transport at 4 C on the next courier to the reference laboratory.

Specimens received by 10:00 AM at reference lab will be resulted within 24 hours.

REFERENCE
Infectious Diseases Laboratory, Testing Menu, February 2010.

LEGIONELLA URINARY ANTIGEN

LIS Code ï LEGUA

COLLECTION/TRANSPORT
Collect urine specimens in standard urine collection container. Send to lab as soon as possible after collection, but refrigerate if transport must be delayed.

RESULTS
The test is available on all three shifts and will be performed within one hour if ordered stat.

Positive results will be reported as positive or negative. A positive result is a presumptive positive for L. pneumophila serogroup 1 antigen in urine, which suggests current or past infection.

A negative result is presumptive negative for L. pneumophila serogroup 1 antigen, suggesting no recent or current infection. However, infection cannot be ruled out since other serogroups and species may cause disease and antigen may not be present in urine in early infection, or the level of antigen present in the urine may be below the detection limit of the test.

Antigen excretion may begin as early as 3 days after the onset of symptoms and persist for up to 1 year afterward. Supporting evidence must be considered to make an accurate diagnosis.

MYCOLOGY CULTURES- Non-Blood (Fungal Culture)

LIS Code ï MYCCU (enter specific site and source)

SOURCES ï ANY (See specific source for collection/transport procedures)
Indicate specific site and source*

Note: Fungus cultures are performed only on specific request; they are not done routinely.

RESULTS
1. Preliminary reports will be sent weekly. (negatives and positives)
2. Most fungus cultures are incubated for 4 weeks; tissues and suspicious respiratory specimens may be held up to six to eight weeks, depending on the organism suspected.

Mycoplasma pneumoniae (PCR)

SPECIMEN- throat ***swab,*** sputum, bronchial, nasal wash

COLLECTION/TRANSPORT- washes, sputa and bronchials are to be collected and submitted in a sterile container. Use supplied swab (Dacron, tipped, plastic shafted) to collect throat specimens and place in Viral Transport Media supplied by lab. Transport to the Lab within one hour, or refrigerate. should be submitted in Viral Transport Media. Maintain and ship at 4 C.

SPECIMEN- 5 ml bronchial wash, BAL, or sputum

Note: Atypical Pneumonia Panel, PCR**-** Includes Mycoplasma Pneumoniae

REFERENCE
Infectious Diseases Laboratory, Testing Menu, February 2010.

Mycoplasma hominis /Ureoplasma Culture, Genitourinary-

SPECIMEN**-**Urogenital (vaginal, cervical, urethral swab s or secretions), sterile body fluids, tissue

COLLECTION/TRANSPORT - Collect appropriate specimens and submit in Viral Transport Media. DO NOT use wooden or cotton swabs.

Transport within 24 hours on cold pack.

NASAL

Tests-culture, Influenzae A/B, MRSA Screen

Required cotton, rayon, foam or polyester **solid** shaft swabs to collect nasal swabs

MRSA SCREEN AND ROUTINE CULTURE COLLECTION PROCEDURE
(use culturette-type swabs in plastic transport tube)

1. Introduce swabs into the nostril about 1-2 centimeters.
2. Rotate swabs against the inside of the nostril for 3 seconds.

3. Repeat step two in the second nostril.
4. Place swabs back into tube.
5. Transport to microbiology ASAP. (< 2 hours at room temperature)

INFLUENZAE A/B COLLECTION/TRANSPORT PROCEDURE
(use individually paper wrapped sterile swabs, and sterile saline tube, both available from microbiology)

1. Introduce swabs, pre-moistened in sterile saline, into the nostril about 1-2 centimeters.
2. Rotate swabs against the inside of the nostril for 3 seconds.
3. Place swabs into sterile saline tube and break off end.
6. Replace cap tightly and send to Microbiology ASAP. (<2 hours at room temperature).

RESULTS
Cultures -Prelims - 24 hours, final results varies but generally 48 hours
Rapid tests- 4-8 hours for routine orders, 1 hour for stats

NASOPHARYNGEAL SWAB

TESTS
Influenzae A/B, RSV, other reference lab tests

COLLECTION/TRANSPORT
Use cotton, rayon, foam or polyester **flexible**-shaft NP swabs to collect NP swabs

NOTE: NP swabs collected for Bordetella Pertussis PCR MUST be collected using DACRON swabs.

Use an enrichment broth (routine culture) or sterile saline (influenzae A/B or RSV) obtained from Microbiology.

1. Using a cotton, rayon, foam or polyester flexible shaft swabs to collect NP swabs, elevate the nose and pass the swab along the floor of the nasal cavity to the posterior pharyngeal wall.
2. Immobilize the head if necessary
3. If the swab meets an obstruction do not use force; it may be impossible to use one or both nostrils.
4. If the patient coughs during the procedure, leave the swab in place, but do not hold it tightly, as he will jerk his head.
5. Insert swab into broth at bedside.
6. Tighten cap of broth or saline over the bent wire of the swab.
7. Transport inoculated broth to the Microbiology Department ASAP, but within 2 hours.

NASOPHARYNGEAL WASHING

TESTS
Influenzae A/B, RSV, other reference lab tests

EQUIPMENT:
1- 3-cc syringe with attached tubing
2- 1- Tube with 2 ï 3 ccôs of sterile saline (available from Micro).

COLLECTION/TRANSPORT
1. Collect a nasal wash specimen (1 ï 2 ml) from the patient by inserting the tubing into the posterior pharynx (one nostril).

2. Alternately flush and aspirate normal saline solution using the above-mentioned syringe with tubing several times, in order to obtain adequate amount of specimen.
3. See specific test ordered for the proper specimen container and transport to the Lab as soon as possible.
4. Contact lab prior to collection if VRP or RVP are ordered for appropriate transport media.

RESULTS
Nasopharyngeal swabs and washings are used for a variety of tests including but not limited to RSV, Bordetella Pertussis PCR, Mycoplasma, and VRP (Viral Respiratory Panel). See specific test for more details.

Reference
Manual of Clinical Microbiology 8th edition, Murray et al. 2003.

OCCULT BLOOD

STOOL (order as stool, occult blood)

NOTE: Performed ONLY on stool. Other specimen sources are listed under BLOOD in the computer. (e.g. blood, miscellaneous fluid, blood emesis)

SPECIMEN COLLECTION AND HANDLING / PATIENT PREPARATION

1. It is recommended that the patient be placed on a high residue diet starting two days before and continuing through the test period.

2. Alternately, the special diet may be omitted initially with dietary restrictions imposed upon the re-testing of all positive results. Occult blood testing is standardized by use of slides with impregnated paper enclosed in a cardboard frame, which permits sample application to one side with development and interpretation from the reverse side.

SPECIAL DIET
1. **Meats:** Only small amounts of chicken, turkey, and tuna.
2. **Vegetables:** Generous amounts of both cooked and uncooked vegetables including lettuce, corn, spinach, and celery.
3. **Fruits:** Plenty of fruits, especially prunes, grapes, plums, and apples.
4. **Cereals:** Bran and bran-containing cereals.

TO BE AVOIDED:
1. **Meat:** Diet should not include and red or rare meat.
2. **Some Vegetables**: Horseradish, turnips, and other peroxidase-containing vegetables such as Broccoli, cauliflower, cantaloupe, and parsnip).
3. **Medications:** Do not ingest aspirin, tonics, or vitamin preparations which contain Vitamin C (Ascorbic Acid) in excess of 250 mg per day.

SPECIMEN COLLECTION ï SLIDES FOR OCCULT BLOOD (OBTAINED FROM LAB)
If slides are not available, a fresh stool may be submitted in a cup. No swabs will be accepted.

It is important that the stool specimen be applied as a very thin smear to the occult blood slides. Hands, gloves, and working area should be clear and free of blood. Because of the non-homogeneity of the stool, it is recommended that smears be collected from three consecutive evacuations.

1. Supply all information requested on the front flap of the slide.
2. Sample application: Open the front flap.
3. Collect a small amount of stool specimen on one end of applicator. Apply a very thin smear in Area A.
4. Reuse applicator to obtain second sample from a different part of the stool specimen. Apply a very thin smear inside Area B.
5. Close the cover.
8. Label slide cover and return to lab.

RESULTS
Final results ï 4-8 hours, 1 hour if stat

Occult Blood is reported as either positive or negative.

OCCULT BLOOD SOURCES OTHER THAN STOOL

Sources - emesis, gastric, ng drainage, miscellaneous fluids
(order in computer as:
blood, emesis
blood, miscellaneous fluid
blood, ng drainage.) ****Do NOT put specimen on Hemoccult Slides****

COLLECTION/TRANSPORT
Transport the specimen immediately to the laboratory in a clean sealed container labeled with specific source.

RESULTS
Final results in 4-8 hours, 1 hour for stats.

Tests will be reported as positive or negative.

As with any occult blood test, the results of the Gastroccult test cannot be considered conclusive evidence of the presence or absence of upper gastrointestinal bleeding or pathology.

NOTE: Many foods (e.g. incompletely cooked meat, raw fruits and vegetables) have peroxidase activity, which can produce a positive test result.

REFERENCE
Hemocult, Beckman Coulter, Technical Product Insert, 2000.

PARASITOLOGY GUIDELINES* (formerly Ova &Parasites, O & P)

TESTS:

Giardia/Cryptosporidium Antigen –(performed by CMH lab) final result 4-8 hours, 1 STAT

This is to be ordered when written order is "O & P" or "Ova and Parasites"

***Microscopic Parasite- (OPSME, OPCID) reference lab (Maximum 3 days TAT)*see note below**

COLLECTION GUIDELINES

Microbiology does not accept any more than 1 specimen for parasitology per day. Excess specimens will be rejected. Parasitology studies should not be ordered on patients who have been in the hospital for more than three days, and whose admitting diagnosis was not gastroenteritis.

NOTE: No swabs will be accepted for Giardia/Cryptosporidium OR Microscopic Parasite.

Caution: (2) Administration of barium, magnesia or oil before collection will render a specimen unsatisfactory for examination for ova and parasites

INPATIENTS:
Collect fresh stool and send to lab ASAP (less then 1 hour. Lab will put stool in two transport vials supplied by reference lab.

OUTPATIENTS:
Fresh stool may be brought in from home but MUST be less than one hour since collection for valid results. Transport vials are not generally sent home with outpatients due chemical constitution.

GUIDELINES FOR ORDERING:

1. If a stool parasite is suspected, a Giardia/Cryptosporidium Antigen test should be ordered. It will be performed and reported within approximately one hour if stat, 4-8 if ordered routinely. (A microscopic exam will NOT be performed.)

2. If the physician inadvertently orders a stool for **Ova and Parasites (O & P**), a **Giardia/Cryptosporidium Antigen** should be ordered. It will be performed and reported within one hour if ordered stat, 4-8 hours if ordered routinely. (A microscopic exam will NOT be performed.)

*3. If the physician, after reviewing negative Giardia/Cryptosporidium Antigen results, wants an actual microscopic exam for other parasites, he/she would then order a **"Microscopic Parasite**ò and have a new specimen collected. (Maximum of three days turnaround time). This specimen must be received in the lab within one hour of collection or appropriate transport media utilized.

*4.If the patient has a relevant travel history or is from a developing country, or has unexplained eosinophilia (suspicious for *Strongyloidies stercoralis)* the physician may request a **"Microscopic Parasite**òinitially. He/She should indicate the history and/or organism suspected. This would **NOT** include the Giardia/Cryptosporidium Immunoassay, but the specimen will be examined microscopically for these organisms. This specimen must also be received in the lab within one hour of collection or appropriate transport media utilized.

WRITTEN OR VERBAL ORDERS		COMPUTER ORDER
Stool for **Ova and Parasites or O & P** (fresh stool in denture cup within 1 hr, or transport media)	→	**Giardia/CryptosporidiumAntigen***
*Microscopic Exam for Parasites (travel history) (fresh stool in denture cup within 1 hr put in 2 transport vials supplied by reference lab kept in micro, see individual instructions in box for inoculating)	→	Microscopic Parasite OPSME OPCID

*These tests can be found on the Microbiology and/or reference menu.

*Do NOT order a Microscopic Parasite if the written order is stool for ñO & Pò or ñOva and Parasites.ò

NOTE: Ova and Parasites (O & P) will no longer be available to order in the hospital computer system.

*Approved by Medical Executive Committee 05/2004.

Note: See ñGiardia/Cryptosporidium Antigenòin the SEROM manual .

Reference:
Manual of Clinical Microbiology, 8th edition, 2003, Murray et al.
Quest Diagnostics Directory of Services 2010.

PINWORM

(THIS IS THE ONLY METHOD USED FOR PINWORM IDENTIFICATION. This replaces the "Scotch Tape" Prep)

1. Remove cap in which inserted an optically clear polystyrene paddle with one side coated with a non-toxic mildly adhesive material. This side is marked "sticky side". Do not touch this surface with the fingers.

2. Press the sticky surface against the perianal skin with moderate pressure. The ideal time for this procedure is early in the morning, before arising, and before emptying the bowels.

3. Print name and other information on the container label.

4. Deliver the container to your doctor's office or to a laboratory. Keep at room temperature.

NOTE: Starplex (R) Pinworm paddles are sterilized with gamma radiation and so contain no potentially hazardous residues.

RESULTS
Final results ï within 24 hours, first shift only

REFERENCE
Product Insert, Starplex Scientific, Ontario, Canada.

QUANTI-FERON –TB (QFT)

This test is a whole blood screening test for active or latent tuberculosis infection.

SPECIMEN-whole blood

COLLECTION/TRANSPORT whole blood collected in special collection kit from infectious disease lab. In each tube a total draw of 1.0 ml, and vigorously shake all tubes 5 seconds. The tubes must be received at Infectious Disease Lab within 16 hours of collection. Specimens must be received at their lab no later than 2pm Monday through Thursday.
RESULTS-Assay is set up Monday through Thursday, with final results available by 2:00 PM on Friday.

REFERENCE
Infectious Diseases Laboratory, Testing Menu, February 2010.

RECTAL SWABS* (Not recommended except for infants)

COLLECTION/TRANSPORT (Culture Swab)

1. Rectal swabs are collected using a Culture Swab.

2. Introduce the swab into the anal canal, past the sphincter muscle, about one-inch, to obtain a good sample.

3. Return the swab to the container and break the capsule at the end of the tube, making sure the protective sleeve is in place over the capsule.

4. Label and send to the laboratory within one hour of collection.

Caution: Rectal swabs cannot be used to do Giardia/Cryptosporidium Antigen, Microscopic Parasite or Occult Blood. Only to be used for Rotavirus and C. Difficile Toxin when stool cannot be obtained.

REFERENCE: Manual of Clinical Microbiology, 8th edition, Murray et al. 2003.

RESPIRATORY SYNCYTIAL VIRUS (RSVN) – SCREEN

SPECIMEN COLLECTION ï See Nasopharyngeal Washings Collection Procedure or Nasopharyngeal swab collection procedures above.

RESULTS
Final results 4-8 hours, 1 hour if stat

RESPIRATORY VIRAL PANEL (RVP) by PCR

SPECIMEN: Nasopharyngeal swabs, nasal washes, bronchial specimens. (Minimum 5 ml)

COLLECTION/TRANSPORT
For nasal swabs collect using a dacron-tipped, plastic shafted swab (Copan Flocked if available). Contact lab prior to collection for appropriate transport media. (Note all specimens other than nasal swabs may be added to viral transport media in the laboratory). Transport to the laboratory ASAP. Specimens should be maintained and transported to the reference laboratory at 4 C.
Viral Targets:
Influenzae A*
Influenzae A, subtype H1*
Influenzae A, subtype H3*
Influenza B
Respiratory Syncytial Virus (RSV) A
Respiratory Syncytial Virus (RSV) B
Parainfluenzavirus 1
Parainfluenzavirus 2
Parainfluenzavirus 3
Human metapneumovirus
Rhinovirus
Adenovirus
NOTE: Specimens will be sent to reference lab Monday through Friday. Turnaround time varies due to time of receipt and day of the week received.

REFERENCE
Infectious Diseases Laboratory, Testing Menu, February 2010.

ROTAVIRUS (ROTA) (rapid latex slide test)

COLLECTION/TRANSPORT

Specimens should be collected as soon as possible after the onset of symptoms.
1.Collect the specimen is a clean, dry container (denture cup). Do not collect the specimen in containers having media, detergents or preservatives in them.

2.If necessary, a sample can be collected from a soiled diaper of pediatric patients, but care must be taken to ensure that the stool does not absorb into the diaper. If this occurs the sample will be rejected.

3. Rectal swabs *may* be used if unable to obtain a stool sample, but is not an ideal sample

4. Send to the laboratory at room temperature within two hours.

RESULTS
Final results 4-8 hours, 1 hour if stat

REFERENCE
Fisher Scientific Company, Sure Vue Rotavirus Technical Product insert, revs 2003.

SMEAR/STAINS Gram Stain, AFB, Mycology (Fungal)

SOURCES-most body sources are acceptable (Indicate specific source and site)

1. Acid-fast (AFB, TB) smears are made routinely on all specimens sent to lab for acid-fast culture and must be ordered by the physician before reporting. Sputum and urines requested for smear only will be concentrated and reported within 24 hours of receipt in the laboratory.
2. Orders for Culture and Gram Stain require two swabs collected from the culture site. Gram stains are performed on all fluids, wounds, and abscesses, and must be accompanied by a physicianôs order before reporting. (The physician may be alerted to unusual or significant findings). Alternately a slide may be made at bedside and transported to the lab ASAP in slide holders. All gram stains MUST have the specific site indicated on the order.
5. Mycology smears (Fungus) are performed when appropriate but only reported when Accompanied by a physicians order. (The physician may be alerted to unusual or significant findings) Mycology smears are routinely performed by a Calcofluor White stain.
5. Potassium Hydroxide (KOH) wet preps for fungus are performed on all. but only reported on skin scrapings when ordered by physician. Specimens also include genital and respiratory sources.
6. Nasal smears for eosinophils on outpatients may be collected by Lab personnel on first shift only. Inpatients will be collected by Nursing personnel. These smears will be reported within 24 hours.

RESULTS
Gram stains-final within4-8 hours, 1 hour if stat.
AFB smears-final 24 hours
Mycology Smears- final 24 hours

SPUTUM CULTURES

AFB, Mycology - see each individual procedure for specific criteria

ROUTINE SPUTUM CULTURE (One specimen per day will be accepted for routine culture)
Use Sterile Sputum Collector.

The specimen MUST be received in a SEALED LEAK PROOF CONTAINER.
Transport to lab two hours of collection, refrigerate if transport is delayed.

INDUCED/ASPIRATED
SPECIMEN ï collected by respiratory therapy or on unit

EXPECTORATED SPUTUM COLLECTION GUIDELINES

1. An early morning specimen is the best for culture because it is more concentrated.
2. The patient should be instructed to rinse his mouth with sterile water to eliminate most oral flora.
3. Instruct the patient to try to bring up sputum from deep in the chest and not saliva or mouth secretions, which are considered contaminants.
4. Send to the Microbiology Department at room temperature in less than 2 hours. If delivery or processing must be delayed, refrigerate at 4C for a maximum of 24 hours.
5. If the patient is unable to expectorate, with a physicianôs order, respiratory therapy may induce sputum production with the aid of a nebulizer.

USE OF SPECIMEN CONTAINER:

CAUTION: Do NOT remove inside tube from the collector. If processing must be delayed, refrigerate the sputum.

INSTRUCTIONS ON USE OF STERILE SPUTUM COLLECTOR:

1. Remove the collector from the bag (save the bag).
2. Lift hinged top only for collection of specimen.
3. Close hinged top and secure with latch.
4. Place bag over the collector and return to the lab within one hour of collection.

REJECTION CRITERIA:
Sputum specimens will be rejected if there is any sputum on the outside of the container or has spilled into the surrounding container

NOTE: All expectorate sputa are evaluated for specimen quality using approved guidelines. Specimens not meeting these criteria will be rejected. The appropriate health care provider will be notified and a repeat specimen will be requested. If a gram stain was ordered, it will be reported. The culture will be canceled with the directions to reorder when resubmitted. Induced/aspirated sputa and specimens sent for AFB are not subjected to these criteria.

Pooled (24 hr) sputa are unsatisfactory for culture.

RESULTS
Preliminary routine sputum culture results ï approximately 24 hours

Final culture results vary depending on organism(s) - usually 48-72 hours)

Sputum specimens without significant pathogens, but containing mixed oral bacteria are reported as ñMixed oral floraò

Pathogens will be reported with sensitivity if appropriate.

A report of ñNo Growthòfrom a sputum sample is an abnormal finding.

LIMITATIONS

Some primary pathogens of pneumoniae do not grow on routine bacterial culture including: Legionella, viruses, fungi, mycoplasma or AFB.

REFERENCES
Clinical Microbiology Procedures Handbook, 3rd edition. 2010.

STOOL (STCUL) (AKA Enteric Pathogens, Culture, C & S)

NOTE: Stool Cultures submitted for routine culture will be examined for Salmonella, Shigella, Campylobacter, and Escherichia coli 0157:H7. Additionally, a õpureò culture of any potential enteric pathogen will be reported (e.g. Pseudomonas, Staphylococcus aureus). Additionally, all diarrheal and or bloody stools will be checked for Shiga Toxins 1 and 2.

****Yersinia enterocolitica and Vibrio must be specifically requested. ****

Although Aeromonas and Plesiomonas may be detected on routine stool cultures, if these organisms are suspected it is helpful to note this on the request.

COLLECTION GUIDELINES (for diagnostic testing, followup testing may vary)

- No more than 2 specimens per patient will be accepted for routine bacteriology culture without prior consultation with a physician who can explain the limited yield provided by additional specimens.
- Specimens for routine bacteriology cultures will not be accepted after the third hospital day without prior consultation.
- Consider testing Stool for C. difficile toxin for all patients over 6 months of age with clinically significant diarrhea and a history of antibiotic exposures rather than routine microbiology studies for enteric pathogens.

COLLECTION PROCEDURE
CAUTION: The specimen must be obtained before antibiotic or antidiarrheal Medicine is given.

1.Send a fresh stool to the laboratory in a sterile container, with a tight fitting lid (denture cup) **within one hour of collection**. (It must be processed within 2 hours of collection).

2. Outpatients will be given the option of collecting the specimen while in the laboratory. If the specimen is collected at home, it must be brought to the laboratory within 1 hour of collection, to ensure processing within 2 hours.

3. When collecting stool from children in diapers, turn the diaper outside in and collect the specimen into a sterile container instead of bringing in a diaper.

REJECTION CRITERIA
1. The specimen will be rejected if there is any stool on the outside of the container.
2. The stool specimen cannot be contaminated with urine or water.
3. Specimens not in transport media will be rejected if received in Microbiology later than 2 hours

after collection.
4. Specimens in transport greater than 24 hours old and not refrigerated will be rejected.

RESULTS
Prelims- 24 hours,
Finals vary depending on organism(s) but usually 48-72 hours)

Final results will either include:
Significant pathogen
And/or
"No Salmonella, Shigella, Campylobacter, or E coli 0157, isolated."

" Stool negative for Shiga toxin 1 and 2." (this comment will be added if the stool is diarrheal and/or bloody)

REFERENCE
Manual of Clinical Microbiology 8th edition, Murray et al 2003.

STOOL FAT – Qualitative (fecal fat)

LIS Code- FATSQ

SPECIMEN - Submit a random stool specimen to laboratory within 1 hour of collection.

Transport 2 grams of FROZEN stool in clean, leak proof, screw-cap container to reference lab

REJECTION criteria- thawed specimens; specimens in transport media, or on swabs will be rejected.

REFERENCE
Quest Diagnostics Directory of Services 2010.

STOOL FAT – Quantitative

Usually 24 hour collection, verify physician orders for time period

Collection by Nursing Unit/Outpatient
1. Pre-weighed container MUST be obtained prior to beginning collection. Contact Lab 5868.
2. Patient MUST be on a standard diet containing 100 grams of fat per day for three days prior to beginning the collection and during the collection period.
3. Specimens must be refrigerated. As each specimen is collected it may be placed in a properly labeled container and placed in the refrigerator and transferred to the laboratory.

Transport to reference lab:
Record the total specimen weight and total collection time on the test requisition and container.

Aliquot a sample, or send entire collection in a sterile screw-cap container. Seal the container in a plastic bag to avoid leakage and ship FROZEN. If entire collection is sent the reference lab will weigh the specimen.

Rejection Criteria
Thawed specimens, room temperature specimens, refrigerated specimens, specimens received in paint cans.

REFERENCE
Quest Diagnostics Directory of Services 2010.

STOOL FOR WBC (WBCST) (AKA Fecal leukocytes. WBC stool)

RESULTS
Final results within 4-8 hours, 1 hour for stats

COLLECTION:
Submit a random stool specimen within 1 hour of collection.
1. Submit fresh stool specimen in denture cup (specimen of choice).
2. Swabs will be accepted if visible stool is on swab. Diapers will be accepted if stool is not absorbed.
3. Transport the specimen to Lab within 1 hour of collection.

REJECTION CRITERIA
1. Specimen will be rejected if stool is on outside of container.
2. Stool absorbed into a diaper will be rejected.

Reference
Manual of Clinical Microbiology, 8th edition, 2003.

STREPTOCOCCUS PNEUMONAE URINARY ANTIGEN

COLLECTION
Collect urine specimens in standard urine collection container. Send to lab as soon as possible after collection, but refrigerate if transport must be delayed.

RESULTS
Final results within 4-8 hours, 1 hour for stats

Positive results will reported as positive for streptococcus pneumoniae urinary antigen. Negative results will be reported as negative for pneumococcal antigen, but infection with Streptococcus pneumoniae cannot be ruled out since the antigen present in the sample may be below the detection limit of the test.

NOTE:
1.The test has not been evaluated on patients taking antibiotics for greater than 24 hours or on patients who have recently completed antibiotic regimens.

2.Streptococcus pneumoniae vaccine may cause false positive results in urine if the test is performed within 48 hours of receiving the vaccination; hence it is recommended that the test not be performed on patients within 5 days of receiving the vaccine.

THROAT CULTURES AND STREP SCREENS (Group A)

COLLECTION
These cultures will be collected by Nursing personnel on inpatients. Lab personnel will collect outpatients.

Required collector: Culture Swab and Tongue Blade

Procedure
1. Take at least 30 minutes after eating or using mouthwash.

2. Using a Culture Swab, depress the tongue with a tongue blade and illuminate the throat well.

3. Have the patient tilt his head back; the farther back the head, the less the tongue will interfere.

4. Pass the dry swab over the tonsils and pharynx being sure not to touch the tongue or mouth
Surfaces.

5. Be sure to touch any red or white patches, exudate, ulceration, or any place the patient says is sore.

6. Return the swab to the culturette.

RESULTS
Throat cultures-prelim at 24 hours, final results vary, depending on isolates but usually 48-72 hours

Strep Cultures- final results 48 ï 72 hours (depending on isolates)
NOTE: Negative Strep Screens will be cultured for Strep Group A.

REFERENCES
Manual of Clinical Microbiology 8th edition, Murray et al. 2003.

TISSUE SPECIMENS (Routine, AFB, Fungus, Viral)

NOTE: DO NOT ADD FORMALIN TO SPECIMEN.

COLLECTION/TRANSPORT PROCEDURE
1. Collect by physician during surgery or cutaneous biopsy procedure.
2. Transport in sterile screw cap container with several drops of non-bacteriostatic sterile saline on a gauze pad to keep tissue moist.
3. Transport to Microbiology at room temperature within 30 minutes. (Do NOT refrigerate or incubate)
4. Always submit as much tissue as possible.
5. Make sure to mark the specimen and requisition with ALL tests ordered on the tissue sample, which could included Microbiology, Pathology/Cytology, and Reference lab testing.

RESULTS
Routine Bacterial culture-prelim sent at 24 hours, final results vary but usually 5 days.

AFB- prelims weekly, finals from 5-8 weeks.

Fungus-prelims weekly, finals from 6-8 weeks.

Viral-reference lab
REJECTION CRITERIA
1. Specimens with formalin added will be rejected.

URINE SPECIMENS (Urine Culture, colony count)

SPECIMEN
Indicate whether midstream, catheterized, supra pubic or cysto on order.
Early morning collected specimens are best when ever possible. Allowing urine to remain in the bladder overnight or for at least 4 hours will decrease the number of false-negative results.

Do not force fluids in order to have the patient void urine.

NOTE: Never collect urine for culture from a bedpan or urinal.

NOTE: Do NOT freeze urine samples submitted for culture.

Collection Material Needed:
Sterile Urine Container*
*Cleansing before voiding does not necessarily improve urine specimen quality. Studies have shown that midstream urines are equivalent to clean-catch urines with regards to contamination.

MIDSTREAM COLLECTION FEMALE (First morning specimens are the best specimen)
1. While holding the labia apart, begin voiding.
2. After several milliliters has passed, collect a midstream portion into a sterile urine cup without stopping the flow of urine.
3. This midstream portion is used for bacterial culture.
4. Send to the Microbiology lab at room temperature within two hours, refrigerate if delayed.

COLLECTION INSTRUCTIONS - MALE
1. While holding the foreskin retracted, begin voiding.
2. After several milliliters has passed, collect a midstream portion into a sterile urine cup without stopping the flow of urine.
3. The specimen should be sent to the laboratory within two hours of collection or refrigerated for up to 24 hours if transport if delayed.

STRAIGHT CATHETER (physicians order, not performed in laboratory)
1. Thoroughly cleanse the urethral opening with soap and water.
2. Rinse the area with wet gauze pads.
3. Aseptically, insert catheter into the bladder.
4. After allowing 15 ml to pass, collect urine into sterile urine container.
5. The specimen should be sent to the laboratory within two hours of collection or refrigerated for up to 24 hours if transport is delayed.

INDWELLING CATHETER (physicians order not performed in laboratory)
1. Disinfect the catheter collection port with 70% alcohol.
2. Use needle and syringe to aseptically collect 5-10 ml of urine.
3. Transfer urine to a sterile urine container.
4. The specimen should be sent to the laboratory within two hours of collection or refrigerated for up to 24 hours if transport is delayed.

REJECTION CRITERIA
1. Specimens submitted in unsterile containers are unacceptable. Results from specimens submitted mistakenly in unsterile containers, where a 2nd specimen is unobtainable will include a disclaiming comment.
1. A repeat urine culture may be requested on midstream urine samples if more than three organisms are isolated (indicating contamination during collection). Catheterized, cysto, or supra-pubic urine samples will not be rejected.
2. 24-hour urine collections are not suitable for culture and will be rejected.
3. Urine specimens older than 2 hours with no evidence of refrigeration will be rejected.

RESULTS
Prelims- 24 hours
Final results vary but usually 48-72 hours (depending on organism isolated)

Colony counts are automatically performed on all urine cultures, with the possible exception of cysto or supra-pubic urines, which are collected in surgery. The amount of growth, urinalysis results, the type of urine (cath, midstream) and the patientôs sex, age, and diagnosis all determine whether organisms are considered pathogenic or contaminants.

REFERENCES
Clinical Microbiology Procedures Handbook 3rd edition 2010.

URINE FOR ACID-FAST CULTURE – (AFB-TB, urine)

COLLECTION PROCEDURE
Submit a first morning clean voided specimen (see above procedure for collection guidelines) to the Microbiology Department within one hour of collection. No preservatives to be added.

24-hour urine collections for AFB will not be accepted.

RESULTS
Prelims- weekly, final results 5-8 weeks

AFB smears are finalized within 24 hours.

Positive cultures will be called immediately upon detection.

REFERENCE
Clinical Microbiology Procedures Handbook 3rd edition 2010.

URINE FOR CHLAMYDIA- see separate procedure, Chlamydia DNA probe, urine.

VAGINAL/CERVICAL CULTURE (GC Culture/Group B Strep)

(GC CULTURE, Routine, Group B Strep)

*Note: Source must be specified to distinguish between vaginal and cervical.
COLLECTION EQUIPMENT
Sterile swabs
Culture Swab
Slide box and 2 slides
Thayer Martin and chocolate medium

COLLECTION PROCEDURE (Physician only)
GC (Gonorrhoeae culture)
1. Visualize the cervix using a speculum without lubricant.
2. Remove the mucus and secretions from the cervical os with swab, and discard the swab.
3. Firmly yet gently sample the endocervical canal with a new sterile swab inoculate directly onto Thayer Martin and Chocolate Agars (taped together, obtained from the Microbiology Department.)
4. Send to Microbiology at room temperature within two hours of collection.

Routine Culture and/or Group B Streptococcus Culture
4. Use a culture swab (approved transport media obtained from central supply or Microbiology, collect as in # 1-3 above, and send to the Lab at room temperature within two hours of collection. Delay may cause loss of pathogenic organisms.
5. Smears for gram stain should be thin and rolled gently onto the slides so white blood cells remain intact. DO NOT ADD FIXATIVE. Fixative will interfere with the gram reaction.

RESULTS
Preliminary results- 24 hours
Final results vary but usually 48-72 hours depending on test ordered and organisms isolated

REFERENCE
Manual of Clinical Manual Microbiology 10th edition, Murray et al. 2011.

VAGINAL

KOH/ WET PREP - For Trichomonas and Yeast

COLLECTION EQUIPMENT
Sterile swabs and 1 cc sterile saline (obtain from Lab)

COLLECTION PROCEDURE (Physician Collected) see above procedure

1. Place swab with collected discharge into tube of saline.
2. Transport to the Microbiology Department within 30 minutes.

NOTE: Yeast infections can also be recognized from a Gram stain.

RESULTS
1 hour for STAT orders.

REFERENCE
Manual of Clinical Microbiology 10th edition Murray et al. 2011.

VIRAL CULTURES

COMPUTER ORDERS: (LAB REFERENCE)

LIS code ï VIRCU

SPECIMEN- body fluids, tissues, conjunctiva, newborn urine, respiratory sources and CSF.

COLLECTION/TRANSPORT
Respiratory- Transfer 5-10 ml of respiratory sample into a sterile leak-proof container. Place brush into a sterile, leak-proof container with a small amount of sterile saline/sterile water to prevent it from drying.

Lung biopsy ï Transport in sterile, leak-proof container with a small volume of sterile saline/sterile water to prevent it from drying.

Body fluids- For all body fluids add an equal volume of specimen to viral transport media.

CSF- 2 ml of CSF in a sterile screw-capped container, plastic vial or tube.

Newborn urine- sterile screw-capped container

Tissue or biopsy material-
Sterile screw-capped container with small amount of saline, no fixative or preservative. As much volume as possible to be submitted.

Conjunctiva- swabs in viral transport media.

SPECIMEN COLLECTION: (Collected by the Doctor or Health Care Provider)
See individual sources for collection procedures.

1. After collection, label the specimen with patient information, date, time, specific site of specimen and virus suspected.

2. Return specimen to Lab ASAP (within 2 hours) for referral to reference lab. If specimen transport is delayed refrigerate within 1 hour of collection and deliver within 1 day.

3. Once in lab refrigerate until courier picks up specimens. Transported to reference lab on cold packs.

REJECTION CRITERIA
Wooden shaft and calcium alginate swabs, dry swabs, swabs in bacterial gel based transport medium, DNA probe transports, tissues in formalin or other fixatives, transports for antigen detection by EIA, frozen specimens, and specimens received at room temperature.

REFERENCES
Quest Diagnostics Laboratory Directory of Services 2010.s

VIRAL RESPIRATORY PANEL (VRESP)

Sources ï any Respiratory specimen including: nasopharyngeal washings (see nasopharyngeal washings above for specimen collection procedure), sputum, and bronchial specimens. NP swabs are discouraged.

Transport specimen to Lab. The specimen is sent to a reference lab. (See label or LIS for current specific lab) Specimen is added to Viral Transport Media. This can be done by the person collecting the specimen or in the Lab. It must be maintained and transported at 4 C. This test is performed 7 days a week with a minimum turnaround time of 3 days from receipt of specimen.

Tests included are *cultures* for:
Adenovirus
RSV
Influenzae A and B
Parainfluenzae 1,2 & 3

REFERENCE
NKC.

VRE SCREEN (stool)

Early detection of patients colonized or infected with VRE is an essential role of the microbiology laboratory. Detecting carriers of VRE for infection control purposes is usually accomplished by the screening of stool, rectal swabs or perirectal swab material. Any specimen may be cultured for VRE however, if an infection is suspected.

SPECIMEN
Stool (denture cup) **specimen of choice
Rectal swab
Perirectal swab

NOTE: If a patient was previously positive, generally three specimens should be submitted on three different days to rule out the continued presence of VRE.

REJECTION CRITERIA

1.Swabs submitted with no visible stool will be rejected.

TRANSPORT
Send to the laboratory ASAP (within 1 hour)

RESULTS
Preliminary will be issued at approximately 24 hours, with final results from 48 to 72 hours from submission.
Negative screen = ñVRE detectedò
Positive screen = ñVRE NOT detectedò

The sensitivity will not be reported unless specifically requested by physician.

Reference
Clinical Microbiology Procedures Handbook, 3rd edition. 2010.

WOUNDS AND ABSCESSES

(Wound Culture, all *appropriate* wounds and abscesses will be cultured for anaerobes)

Wounds should preferably be collected prior to the initiation of therapy and only from wounds that are clinically infected or that fail to heal over a long period of time.

LABELLING OF SPECIMEN
Indicate specific site of wound or abscess
for example: source- leg wound site-left thigh

NOTE: ROUTINE, AFB, and Fungus cultures must be ordered individually.

COLLECTION/TRANSPORT (Do NOT refrigerate or incubate during transport)

General Abscess
1, Remove surface exudates by wiping with sterile saline or 70% alcohol.
2. Tissue or fluid is always superior to a swab specimen. If swabs must be used, collect two; one for culture and one for gram stain.
3. Transport swab at room temperature to the Microbiology department within 2 hours .If an un-preserved aspirate is collected transport at room temperature within 30 minutes.

Open wound, abscess, or bite wound
1. Aspirate if possible or pass an anaerobic culture swab deep into the lesion to firmly sample the lesionôs ñfresh borderò
2. Transport swab at room temperature to the Microbiology department within 2 hours. If an un-preserved aspirate is collected transport at room temperature within 30 minutes.

Closed wound, abscess, or bite wound
1. Aspirate abscess material with needle and syringe.
2. Do not send needle to the Microbiology Laboratory, either seal the syringe or put specimen in sterile container.
3. Transport immediately (<30 minutes) to the Microbiology department at room temperature.

REJECTION CRITERIA
Any specimen received in formalin will be rejected.

Specimens in transport media > 24 hours old.

RESULTS
Prelims sent at 24 hours
Final results vary but usually 72 hours. (depending on organism suspected/isolated)

NOTE: GRAM STAINS WILL BE MADE AND EXAMINED, BUT SHOULD BE ORDERED BY THE PHYSICIAN.

Reference
Clinical Microbiology Procedures Handbook, 3rd edition. 2010

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Submission of Tissue Specimens

Frozen sections will be received in the fresh state and will be accompanied by the slips with the patient's name and other identifying information. Following completion of the frozen section, the diagnosis will be communicated directly to the surgeon, by the pathologist.

Occasionally, muscle biopsies are submitted in saline. Most other tissue, other than frozen sections, will be submitted in formalin. When tissue is submitted in the fresh state, it should receive immediate attention and be formalinized as soon as possible. Tissue requiring electron microscopy should be sample and the samples preserved in glutaraldehyde as soon as possible.

Extremities shall be accompanied by a disposal slip. For sanitary reasons such large specimens are kept in the department for a short period of time. They are refrigerated. If the extremity is to be released to a funeral home, this will be done as soon as possible after examination of the specimen. If the hospital is to dispose of the specimen, housekeeping will be notified as soon as possible.

PRINCIPLES

Any non-exempt tissue removed from the patient is examined by a pathologist. Diagnosis rendered by the pathologist is based on tissue exam, patient medical history, and physician clinical impression.

PROCEDURE

A. Surgical biopsies within the hospital, outpatient suite or submitted from physicians office.

Specimen: Any tissue or biopsy removed from patient. Examples are skin lesion, liver biopsy, rectal biopsy, etc.

1. Obtain 10% Zinc Formalin from Laboratory.
2. Place specimen in 10% Zinc Formalin.
3. Label container with patient name and body site of specimen.
4. Complete Surgical Tissue Form includes all information required, and have physician verify information and sign the slip.
5. Send to Pathology Laboratory.

B. Surgical biopsies from surgical suite.

Specimen: Any tissue removed from patient that is to be submitted to Pathology.

1. Place specimen in bottle containing 10% Zinc Formal in.

2. Label bottle, complete surgical tissue form including all information relating to patient, and have surgeon sign.
3. Accession specimen in computer.
4. Specimens are collected from surgical suite by histology at approximately 1:30 p.m. and 3:30 p.m. The histologist initials the white and yellow tissue slips. The yellow copy is left at surgery desk as a record that the specimen was received by the Lab. Specimens should be tubed from OR when appropriate.

Specimens must be properly labeled with the patient's name and specimen location, and physician's name, if coming from on outside source.

Specimens received from the surgical department, or from the floors, must be accompanied by the appropriate surgical form, stamped with the patient's name, medical record number, age, physician, and must include the source of the specimen, as well as a clinical diagnosis, and physicians signature. Specimens are accepted only from physicians or other persons authorized under law.

Sub-optimal specimens should be documented in the Laboratory Information System. If a specimen is unlabeled or unaccompanied by adequate requisition information, the submitting person should be notified and the problem corrected. If a specimen is unfixed or unrefrigerated for an extended period, this is documented. The pathologist will be notified of inappropriate fixation and determine how to proceed with processing. Specimens received with a contaminated outside surface are also documented. If the requisition is also contaminated, a new requisition should be requested from submitting personnel. All specimens are processed using Universal Precautions.

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Cytology Specimen Collection

Correct diagnosis by evaluation of individual cells is dependent on an adequate specimen, carefully collected and labeled.

BODY CAVITY FLUIDS AND CYST FLUIDS
Body fluids not processed immediately must be stored in the refrigerator. Heparin should be added to bloody specimens to prevent clot formation.

BREAST SMEARS
Breast smears must be fixed in 95% alcohol.

BRONCHIAL WASHINGS AND BRUSHINGS
Bronchial specimens which are for both Cytology and Microbiology, if not previously separated, will be separated under sterile conditions by the Microbiology Department. Microbiology will deliver the specimen to Cytology. Bronchial brushings must be smeared on slide and fixed in 95% alcohol at the collection site.

ENDOMETRIAL BRUSHINGS
TO BE DONE BY PHYSICIAN. Inserts brush aspirator to dome of uterus, gently. Withdraws 1 cm. Extrudes brush filaments by inserting plunger completely. Rotates brush aspirator (barrel) 90 degrees into right cornu. Rotates brush filaments (plunger) 360 degrees. Rotates brush aspirator (barrel) 180 degrees into left cornu. Rotates brush filaments (plunger) 360 degrees. Brushes entire endometrial surface. Retracts brush filaments into cannula and aspirates sample (pulls plunger). Spreads endometrial material with brush filaments. DO NOT ALLOW TO DRY. Fixes immediately with slides lying flat. Before making smears, slides should be labeled on the frosted edge using a black lead pencil with the patientôs first and last name.

FINE NEEDLE ASPIRATIONS
Contact Cytopathology Lab for assistance in collection, preservation, and interpretation. Fix slides immediately in 95% alcohol.

GASTRIC WASHINGS
Submit gastric samples, properly numbered, on ice, immediately.

GYN SPECIMENS
All GYN specimens must be labeled with the patient's name written on the frosted end of the slide in lead pencil and the history portion of requisition completely filled out. Slides received with no name are not accepted. Repeats are requested on broken slides that cannot be salvaged. Slides must be received in alcohol fixative or previously spray-fixed. The physician shall be notified immediately of inadequately submitted specimens. The reason for rejection shall be documented in the patient record. Repeat pap smears are requested when the following criteria is not cytologically: (1) smear is scanty in cellular material; (2) bloody artifacts, lubricant, or powder crystals are present; (3) smear preparation is too thick, too thin, or dry. NOTE: GYN specimens will be referred to a reference lab.

SPINAL FLUID
Spinal fluids must be submitted, as soon as possible, in a separate tube for cytology processing.

SPUTUM
Sputum held for more than 24-hours prior to cytological testing should be preserved with carbowax fixative. Specimens not meeting this criteria should be recollected.

URINE
First morning urine should be delivered to the laboratory immediately. If the specimen cannot be delivered immediately, it should be stored in the refrigerator.

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Microbiology Approximate Turn-Around Times

Note: Turnaround times given are for negative cultures. Positive cultures final report may vary depending on specific organisms grown.

Test	CPT4 Codes	Preliminary Reported	Final Reported
AFB CULTURES	87015	Weekly	5 - 8 weeks, if negative
AFB SMEARS	87206	n/a	24 Hrs, 1st shift only
BLOOD CULTURE	87040	48 Hours	5 Days
C.DIFFICILE TOXIN (SEROLOGY)	87324	n/a	4-8 Hrs, if not STAT

CATH TIP CULTURES		24 and 48 Hours	72 Hours
HP FAST (formerly CLO TEST)	87081	n/a	24 Hours
CRYPTOCOCCAL ANTIGEN (SEROLOGY)	86641	n/a	4-8 Hrs if not STAT
EYE CULTURES		24 and 48 Hours	72 Hours
FLUID CULTURES	87070	24 and 48 Hours	72 Hours
FUNGUS (MYCOLOGY) CULTURES	87101	Weekly	4 weeks, if negative
GC CULTURES	87070	24 and 48 Hours	72 Hours
GIARDIA / CRYPTOSPORIDIUM	87329 87328	n/a	4-8 Hrs, if not STAT
GRAM STAIN	87205	n/a	4-8 Hrs if not STAT
INFLUENZA A/B	87400 X 2	n/a	4-8 Hrs, if not STAT
LAGIONELLA URINE ANTIGEN	87449	n/a	4-8 Hrs, if not STAT
OCCULT BLOOD	82270	n/a	4-8 Hrs if not STAT
RESPIRATORY CULTURES : Sputum, Bronch, Throat, Strep	87070	24 Hours	48 hours, if negative
ROTAVIRUS SEROLOGY	87425	n/a	4-8 Hrs, if not STAT
RSV SEROLOGY	86756	n/a	4-8 Hrs, if not STAT
STOOL CULTURES	87045	24 Hours	48 hours, if negative
STREP GROUP A SCREEN - Part 1 Serology	87430	n/a	4-8 Hrs, if not STAT
STREP GROUP A SCREEN - Part 2 Culture	87081	Done if Serology = Neg.	48 Hours
STREP PNEUMO URINE ANTIGEN	87449	n/a	4-8 Hrs, if not STAT

TISSUE CULTURES		24 and 48 Hours	72 hours, if negative
URINE CULTURE	87070	24 Hours	48 hours, if negative
WOUND CULTURES	87070	24 and 48 Hours	72 hours, if negative
WBC, Stool	87205	n/a	4-8 Hrs, if not STAT

24-Hour Urine Collection Instructions

When collecting 24-hour urine specimens for chemistry testing, do as follows:

1. Check to see if a preservative is needed prior to beginning collection.
2. Obtain 24-hour urine container and preservative if needed, from a Lab.
3. Have patient void and discard this specimen.
4. Record the time and collect all urine voided for the next 24-hour period.
5. Refrigeration is required for most specimens during the collection period unless otherwise specified.
6. Record the ending time. Send urine to label.

Include all information, date, times, and initials of collector on urine sample.

Note: The same procedure is followed for other timed collections, such as 2-hr or 4-hr.

Check to see if other criteria are required, such as "protect from light".

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LABORATORY COMPLIANCE PLAN

WRITTEN POLICIES AND PROCEDURES

In order to facilitate compliance with applicable laws and regulations, the Clark Memorial Laboratory will maintain this written compliance plan for appropriate billing practices. This plan was developed under the supervision and direction of the Corporate Compliance Officer, the Laboratory Director, and the Corporate Compliance Team to meet State and Federal Regulations. These policies will be provided in a three-ring notebook with the Laboratory Directory of Services and will be designated as the ñLaboratory Compliance Plan for Appropriate Billingò. This Directory will be made available to all individuals who are affected by these specific policies. The Laboratory will provide all laboratory clients a Laboratory Directory of Services Manual, which will incorporate information contained in this Lab Compliance Plan. New, amended, or revised compliance policies as they are developed will be made available to users of laboratory services. The Laboratory Director and Corporate Compliance Officer will maintain a list of the laboratory clients and others receiving this information to facilitate timely updates.

STANDARDS OF CONDUCT

The Lab Corporate Compliance Plan specifies standards of conduct for all hospital employees that are affected by the plan. These standards of conduct also affect users of Laboratory services. These Standards of Conduct are provided so that those using Clark Memorial Laboratory services and those participating in provision and billing of laboratory services will understand what is expected. Minimal Standards of Conduct are intended

to facilitate compliance with applicable laws and regulations as it related to laboratory billing. Updates and modifications of the standards of conduct will be supplied to those who are on the list maintained by the Laboratory Director. The Laboratory Scope of Services manual has a section designated for Laboratory Corporate Compliance Plan materials and periodic updates.

Compliance Guidelines for Standards of Conduct

A. Laboratory staff and Compliance Officer will make every reasonable

effort to:

1. Ensure guidelines are being followed.

2. Ensure a medically necessary diagnosis from the patientôs chart is provided with the physicianôs order.

3. Have an Advance Beneficiary Notice signed when the patient is a Medicare hospital outpatient and a medically necessary diagnosis is not provided with the physicianôs order. The Compliance Officer or designee will contact the ordering physician make every reasonable effort to obtain a medically necessary diagnosis from the patientôs chart to prevent the Medicare patient from having to pay for the claim out of pocket.

4. Be in compliance with all laws, regulations, and guidelines of federal and state programs relating to clinical and pathology laboratory issues.

B. Physicians and other individuals authorized by law to order tests will be encouraged to behave as follows when ordering tests on patients in the Medicare and/or other similarly regulated health care program:

1. Order only tests that are considered ñmedically necessaryò and/or otherwise appropriate for reimbursement under the applicable program(s); OR Tests that are desired by the patient even though not covered for payment under the applicable program AND for which the patient or someone else agrees in advance to pay personally if payment is denied under the applicable program, using an appropriately executed Advance Beneficiary Notice, (ABN), or other appropriate format which will allow the laboratory to bill and collect from the patient or other party agreeing to pay on the patientôs behalf without violating the requirements of the applicable program(s).

2. Make sure all tests ordered are accompanied with an appropriate diagnosis, symptom, or ICD-9ï CM code.

3. Make sure requests for regulated tests (as determined by the appropriate Intermediary) are accompanied by a Medicare approved diagnosis, symptom, or ICD-9-CM code or a properly signed Advance Beneficiary Notice.

4. Be in compliance with all laws, regulations, and guidelines of federal and state programs relating to clinical and pathology laboratory issues.

C. ETHICS COMPLIANCE - Ethics compliance includes, but is not limited to:

1. Honesty;
2. Follow laws, regulations, and guidelines;
3. Discouraging unlawful practices;
4. Consideration of misuse of Medicare funds;
5. Consideration of abusive practices, which cost Medicare patients out of pocket;
6. Not offering or accepting anything of value or favors for referrals.

III. MEDICAL NECESSITY

The laboratory and billing staff will, to the best of their ability, only submit claims to federally funded health care programs for services that the laboratory has reason to believe are medically necessary. The hospital will retain billing records, such as requisition forms containing diagnosis supporting the medical necessity of a laboratory service, for two years on site and will continue to have access to such records according to the hospital retention of documents. (Currently 25 years for medical records and seven years for billing records.)

Physicians may order any tests, including screening tests, that they believe are appropriate for the treatment of their patients; however, physicians will be made aware, by the chief Compliance Officer, Laboratory, Laboratory Director, or other billing and/or hospital or laboratory staff members, that Medicare will only pay for tests that meet the Medicare definition of ñmedical necessityò and that Medicare may deny payment for a test that the physician believes is appropriate, such as a screening test, but which does not meet the Medicare definition of medical necessity.

The Chief Compliance Officer, Laboratory Director, or other billing and/or laboratory staff members will advise physicians that when they instruct the laboratory to seek Medicare reimbursement for tests ordered, they should only order those tests that they believe are medically necessary for the diagnosis and treatment of their patients. This information will be available in the written laboratory compliance plan and may be distributed in an annual or periodic notice to physicians.

The following steps have been implemented and will be revised as needed to ensure claims submitted to federally funded health care programs meet the appropriate program requirements:

A. Requisition Design

The hospital provides pre-printed forms for ordering Outpatient Laboratory tests. This for will be reviewed at least annually for any revisions that make the form more user- friendly with respect to facilitating compliance with applicable laws and regulations. Components of the pre-printed form will include:

1. Tests listed separately instead of as a bundle, so the physician can order just the tests that he/she determines are medically necessary. If he/she desires tests such as screening tests, which are not paid for under Medicare or Medicaid, he/she is encouraged to inform the patient and have the ABN signed. If this is not done, the Lab staff or other authorized hospital employee will have the patient sign the ABN prior to testing.

2. Spaces will be provided for ICD-9-CM codes, diagnosis, or symptoms, as necessary to show the medical necessity of each individual test ordered.

3. Only organ and disease specific panels that exist in the AMA approved CPT-4 codebook (or authorized by updates to the book) will be listed on the form.

4. The form will in no way lead the person ordering tests to order any pre-determined tests.

5. Customized panels are discouraged and will not be listed on the pre-printed lab requisition.

6. The form will contain a written statement that will serve as notice to physicians that Lab must have an Advanced Beneficiary Notice signed by the patient for those tests that are not covered by Medicare.

7. The form will contain adequate space for ICD-9-CM codes, diagnosis and/or symptoms that show medical necessity for each test or approved panel ordered. Any exceptions to the proof of medical necessity, such as ALL SCREENING Procedures, will require an ABN signed by the patient unless changes are made to the Medicare current billing policies.

B. Advance Beneficiary Notice ï (ABN)

1. The ABN should be initiated by the physician when possible. A copy should be provided to the Laboratory prior to, or at the time of, ordering.

2. The ABN should have a standard format approved by the Corporate Compliance Officer.

3. Required components of the ABN are as follows:

   a. Identifies the specific lab test(s),

b. Gives the reason the bill for the test is likely to be denied,

c. Assures that a patient understands that he or she may be responsible for payment if the test is considered to be medically unnecessary by Medicare, and;

d . Allows the beneficiary to make an informed decision whether or not to receive the service and pay for it out of pocket.

C. Diagnosis

1. The diagnosis **must** come from the ordering physician. It cannot come from the patient unless confirmed by the ordering physician.

2. The Laboratory cannot use diagnostic information provided by the physician from earlier dates of service (other than standing orders). Ongoing symptoms and diseases are acceptable if they are on the physician's order.

3. If no diagnosis is given or the diagnosis does not meet the Medicare medical necessity regulations, an Advance Beneficiary must be signed by the patient before the test is performed. The original ABN should stay with the permanent medical record with a copy to be maintained in lab.

4. The Laboratory or other designated hospital employees will contact the ordering physician to obtain diagnostic information in the event that the physician has failed to provide such information. When diagnostic information is obtained from a physician or the physicianôs staff after receipt of the specimen and the requisition form, documentation of the receipt of such information will be created and maintained with the original order. This is to include source of information, date, and time, and initials of staff member documenting this information.

5. Diagnoses codes received from the ordering physician must be documented in writing, preferably on the test request form.

D. Test Utilization Monitoring -

The Corporate Compliance Officer, Laboratory Director, and other billing and laboratory staff member will make a conscientious effort to avoid encouraging physicians to order medically unnecessary laboratory tests. The Laboratory will perform periodic monitoring, at least annually of the

highest volume CPT4 codes utilized by physicians and billed to federally or state funded programs. The lab, in preparing monthly statistics, will monitor for any shifts in testing volumes by tests. The intention is to identify any trends or shifts in testing patterns that may indicate waste, fraud, or abuse that might otherwise go undetected. Results of all monitoring will be reviewed by the Corporate Compliance Officer for any necessary action. This monitoring will become part of the permanent record and be retained according to the current Retention of Records policy in lab, at least two years. Monitoring may be performed by multiple departments based on the nature of the monitor.

Typical monitors that may be used are shown below:

1. Utilization by CPT codes of the 20 most commonly requested laboratory test procedures.

2. Number of individual physician contacts required verifying medical necessity of test(s) requested.

3. Specific reminders of violations or potential violations of compliance policy.

4. Results pertinent to lab on the Compliance Hotline.

E. Notices to Physicians

The Laboratory and/or hospital Administration will provide periodic notices to active physicians and any other legally authorized user of laboratory services, a written notice that incorporates at least the following information:

1. The Medical Necessity Policy,

2. The individual components of every lab profile offered and the CPT-4 or HCPCS codes the hospital will use routinely to bill those tests/profiles to the
Medicare Program,

3. A description of the billing process for those profiles.

4. Advise the physician that the Laboratory does not routinely provide customized panels and that any requests for customized panels will be forwarded for consideration to the Laboratory Director and Corporate Compliance Committee for determination

of the feasibility from a billing standpoint in consultation with the Laboratory Medical Director to assure clinical appropriateness.

Note: This notification may take the form of the Outpatient Lab order form.

F. Physician Acknowledgments

It will not be the policy of Clark Memorial Hospital Laboratory to design custom panels for physicians. Should the physician request a customized profile, the profile will be evaluated as stated in paragraph E. (4) above. If the panel is approved, an acknowledgment is required by this plan. The acknowledgment is to be signed by the physician and retained with the permanent files according to the hospital retention plan. The acknowledgment must contain the following information:

1. Name of Physician requesting the profile,

2. The tests listed in the profile,

3. The physician has been informed of the reimbursement status from Medicare (and where appropriate, Medicaid),

4. If reimbursement from the above mentioned federal programs is to be sought, each test must be, individually, medically necessary as documented by ICD-9-CM code, diagnosis, and/or symptoms.

5. The physician acknowledges some of the tests in the profile may be denied,

6. The physician has been informed the OIG takes the position (according to ***Federal Register/Vol. 62, No.41, Monday March 3, 1997, Notices***) that a physician who orders ***medically*** unnecessary tests may be subject to civil penalties, and

7. The Lab Medical Director and associate pathologist(s) are available to assist the physician in ensuring appropriate tests are ordered.

IV. BILLING

The laboratory, billing, and coding staffs will, to the best of their ability, only submit claims to federally funded health care programs for services the laboratory has reason to believe are medically necessary. The hospital will retain billing records, such as requisition forms containing diagnosis supporting the medical necessity of a laboratory service, for two years on site and will continue to have indefinite access to such records

thereafter. Record retention will conform to the official hospital policies on record retention.

Physicians may order any tests, including screening tests, that they believe are appropriate for the treatment of their patients; however, physicians will be made aware, by the Corporate Compliance Officer, Laboratory Director, or other billing and/or laboratory staff members, that Medicare will only pay for tests which meet the Medicare definition of ñmedical necessityò and Medicare may deny payment for a test that the physician believes is appropriate, such as a screening test, but which does not meet the Medicare definition of medical necessity.

The Corporate Compliance Officer, Laboratory Director, or other billing and/or laboratory staff members will advise physicians that when they instruct the laboratory to seek Medicare reimbursement for tests ordered, they should only order those tests that they believe are medically necessary for the diagnosis and treatment of their patients. This will be provided at least annually in a notice to physicians.

The following steps have been implemented and will be revised as needed to ensure claims submitted to federally funded health care programs meet the appropriate program requirements:

A. SELECTION OF CPT OR HCPCS CODES

CPT or HCPCS codes used to bill Medicare or Medicaid will accurately describe the service that is ordered and performed. To the best of the staffôs ability, the code that most accurately describes the ordered and performed tests will be used. A laboratory staff member with technical expertise will monitor periodically the CPT codes for code accuracy and the diagnosis for medical necessity. The CPT-4 coding database for of the Hospital billing system is maintained by the billing department, under the supervision of the CFO (or his/her designee) with review by the Directors of Health Information Management and Laboratory (or their designees) at least annually.

B. SELECTION OF ICD-9-CM CODES

At the direction of the Health Care Financing Administration (HCFA), Medicare carriers and intermediaries have established lists of tests that must be accompanied by diagnostic information to establish medical necessity before Medicare coverage will be assumed (ñlimited coverage policyò). Such diagnostic information may be submitted either through the use of ICD-9-CM codes or a narrative description. Only diagnostic information obtained from the ordering physician should be submitted as a medically necessary diagnosis.

It will not be an acceptable practice to:

1. Use diagnostic information provided by the physician from earlier dates of service (other than standing orders).

2. Use ñcheat sheetsò that provide diagnostic information that has triggered reimbursement in the past without verifying that the diagnostic information being submitted actually applies to the item(s) of service currently being billed.

3. Use computer programs that automatically insert diagnosis codes without receipt of diagnostic information for claims submission purposes.

It is an acceptable and encouraged practice for anyone responsible for Medicare billing to:

1. Contact the ordering physician to obtain diagnostic information in the event the physician has failed to provide such information.

2. Provide services and diagnostic information supplied pursuant to a standing order executed in connection with an extended course of treatment.

3. Accurately translate narrative diagnoses obtained from the physician to ICD-9-CM codes.

When diagnostic information is obtained from a physician or the physicianôs staff after receipt of the specimen and/or the requisition form, documentation of the receipt of such information will be created and maintained by designated hospital staff with the original. This form must document the patientôs full name, person contacted, date, diagnosis provided, person calling, and date and time of call. The original order and subsequent documentation goes to Health Information Management. A copy is to be maintained in lab for two years. The order is to be easily accessible if any question should occur concerning the documentation of the medically necessary diagnosis for any tests being ordered by a physician.

If the physician cannot provide documentation proving medical necessity for tests performed on Medicare patients, the patient will be informed that Medicare will likely deny payment for the test(s) ordered and asked to sign an Advance Beneficiary Notice if they still want the test(s) performed. If the patient chooses not to sign the Advance Beneficiary Notice, the ordering physician will be notified and the test procedure(s) will not be performed by the laboratory. Effective January 1, 2001, no testing will be performed without appropriate orders and documentation per notice to physicians sent by the CEO.

If a Medicare patient is not informed that Medicare will likely deny payment, has not signed an Advance Beneficiary Notice, and the test(s) are performed, the patient will not be billed if Medicare denies payment.

Note: The Patient Accounting Department under the direction of the CFO administers Clark Memorial Hospital Laboratory billing. The internal policies of the billing department will be consistent with this Laboratory Compliance Plan. CPT4 coding is a function of the laboratory information system and the Hospital Information systems, as programmed under the supervision of the Corporate Compliance Officer, Laboratory Director, the Health Information Management Director, and the CFO (or their designees). ICD-9-CM coding is the ultimate responsibility of the Health Information Management Department, which reports to the CFO. Coding policies will be consistent with the Laboratory Compliance Plan and regulatory information as received from those federal and state agencies. It is the responsibility of the CFO to assure that the billing department input correct CPT-4 or HCPCS codes as notices are received from HFCA or the intermediary. Copies of these changes are to be forwarded to the Laboratory Director for inclusion in the Compliance Plan as appropriate.

C. TESTS COVERED BY CLAIMS FOR REIMBURSEMENT

The laboratory will only submit claims for reimbursement to any payer for laboratory procedures that are both ordered and performed. If the laboratory receives a specimen without a test order or with an ambiguous test the laboratory or other authorized hospital staff member will contact the ordering physician to determine what test(s) is desired before submitting a claim for reimbursement. Specimens received, however, which cannot be processed due to laboratory accident, insufficient quantities, or specimen rejection, in accordance with the laboratoryôs specimen rejection policy, will not be billed or will be credited if billed before the determination that the specimen could not be processed. NOTE: The Billing Department must be notified of any tests that may need to be canceled once a patient is discharged.

BILLING OF AUTOMATED MULTICHANNEL CHEMISTRY TESTS

Unless there is an advance agreement with the patient or other willing payer which will allow the laboratory to legally bill and collect for such testing, any multi-channel chemistry test(s) ordered should be requested only if the patient has a medically necessary diagnosis or symptom to support the ordering of that test procedure. Multi-channel chemistry tests for which Medicare is to be billed will only be grouped together in accordance to current Medicare billing practices. The laboratory and billing will make all reasonable efforts to be aware of the most current billing practices; however, this policy is contingent upon the information provided by the Medicare intermediary which is received by the billing department and forwarded to lab for assistance in determining proper coding.

BILLING OF CALCULATIONS

When test results are derived from calculations as a result of other tests performed, these calculated tests will not be considered billable tests for Medicare billing purposes.

PROCEDURES FOR REQUESTING OUTPATIENT LABORATORY TEST (S):

- Option 1: Preferred: Lab Outpatient Order/Billing Form: The laboratory has implemented the use of an outpatient request form designed to encourage compliance with Medicare policies and procedures. The ABN is a separate form. It is preferred that all forms be faxed to Centralized Scheduling and/ or sent to the hospital with the patient or specimen.

- Option 2: Physician Prescription Pad: Physicians may request lab procedures by using a prescription pad to document date, patientôs name, test(s) requested, diagnosis and/or symptoms to indicate medical necessity, and their signature. This request is to be signed by the physician.

- Option 3: Other written orders: Written requests may be accepted provided they indicate clearly the ordering physician, the patient to be tested, the date, the test(s) to be performed, the diagnosis and/or symptom, and any other pertinent information regarding the test(s) procedure(s).

- Option 4: Verbal orders: Verbal orders are accepted only as outlined in hospital policies. Verbal orders may only be accepted by the professional staff (i.e. Technologists and Technicians). . All verbal or phone orders must be entirely read back and verified for accuracy of transcription.

- **Confirmation of unclear orders (verbal or written) –** All lab test orders must be written clearly, using standardized terminology. Orders using non-standard or non-specific terms, or orders that are written in unreadable penmanship must be confirmed before being entered in the LIS. Entering a ôbest guessô is not acceptable.

V. RELIANCE OF STANDING ORDERS

Standing orders are allowed in connection with an extended course of treatment but must conform to current hospital policies. Standing orders are maintained by Registration. When a patient arrives who has a standing order, registration sends a copy of the order with the patient to the Laboratory.

The laboratory does not maintain Nursing Homes and Skilled Nursing Facilities standing orders.

VI. COMPLIANCE WITH APPLICABLE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) OFFICE OF INSPECTOR GENERAL (OIG) FRAUD ALERTS)

All fraud alerts setting forth activities believed to raise legal and enforcement issues by the OIG will be carefully considered by the Corporate Compliance Office, CFO, Laboratory Director, and other members of the Compliance Committee as determined by

the Corporate Compliance officer. Any conduct criticized in a fraud alert will be reviewed, and if it is determined that such conduct is occurring within the Medicare practice of the laboratory billing system, the potentially fraudulent activity will be brought to the attention of the individual(s) responsible. Reasonable action will be taken to discontinue fraudulent activities and to prevent such activities from occurring in the future.

(See also section herein on ***CORRECTIVE ACTION*** for the specific corrective action to be taken.)

VII. SALES AND MARKETING

The marketing of the laboratory services will be straightforward, fully informative, non-deceptive, and carried out in an honest endeavor. In an effort for physicians to fully understand the services offered by the laboratory, the services provided when tests are ordered, and the financial consequences for Medicare, as well as other payors for the testes ordered, the laboratory will provide marketing information that is clear, correct, non-deceptive, and informative. Marketing practices will be reviewed at least annually as a part of the review of this plan, by the Corporate Compliance Officer, the Laboratory Director, and the Corporate Compliance Team, in consultation with legal council, as deemed appropriate by the Corporate Compliance Officer.

Contracts with Clients

Contracts, bids, or sales proposals may reflect competitive pricing; however, prices will not be determined by volume of business from the account billed to a federally funded program. All contracts must be approved and signed by hospital Administration.

Indigent Patient Testing Service

At a physicianôs request or as part of a contract/agreement, the Clark Memorial Hospital Laboratory may agree to perform testing for indigent patients at a reduced charge or at no charge where the client offers a similar discount or waiver of his or her own charges or fees. The Corporate Compliance Officer, CFO or CEO, and Laboratory Director must approve this action.

Adjustments or Write-offs

Requests from clients for adjustments or write-offs of charges resulting from misunderstandings between the client and Clark Memorial Hospital or errors on the part of Clark must be brought to the attention of the Compliance Officer, CFO, and/or Laboratory Director for a decision.

Health Fairs

The Laboratory Director will approve all testing performed at a health fair at which the Clark Memorial Hospital Laboratory is precipitating. These tests may be performed without charge or at reduced fee(s) only if approved and appropriate criteria met.

Discounts may be based only on competitive factors such as pricing and discounts offered by other laboratories.

Giving and Receiving Gifts

Giving and receiving of gifts is not encouraged. Modest gifts for entertainment are subject to good judgment. Gifts for common courtesy such as lunch at a luncheon meeting or a box of candy for the efforts to be compliant to a new procedure should be considered kind acts and not bribes for business. All personnel will comply with the hospital policy regarding gifts and conflict of interest in addition to any policies stated or implied herein.

Client Supplies

Supplies may be provided solely for the purpose of collecting, processing, and transporting specimens to the hospital laboratory. Supplies not directly related to the laboratory test performed at Clark Memorial Hospital Laboratory will not be provided.

Professional Courtesy

Clark Memorial Hospital does not offer professional courtesy testing to its clients. The federal governmentôs position regarding this practice is to view it as an unlawful inducement.

Computer Placements

Computers and/or printers may be provided to Clark Memorial Hospital clients for the sole purpose of order entry and result retrieval. The use of these computers and/or printers for any other purpose is prohibited. The Corporate Compliance Officer, Laboratory Director, or designee must approve all such activities.

Courier Services

The Clark Memorial Hospital may use a courier service for the purpose of laboratory pickup and delivery of other items related to other departments within the hospital or outside the hospital. This courier route may include the post office, bank, physician offices, and other required stops. Any pick up and delivery along the route in no way indicates enticement for solicitation of laboratory services.

Anti Kickback Law

The laboratory does not waiver the requirements for co-payments, co-insurance, and deductibles at the request of the client. This is considered by the Inspector General to be a potential violation of the Anti Kickback Law. Any activities regarding proposals for waiver of fees must be reviewed and approved by the Corporate Compliance Officer or designee.

VIII. PRICES CHARGED PHYSICIANS FOR PROFILES

As tests are included in or added to profiles, the price for the enhanced profile increases and the overall price for the profile is never below costs.

IX. RETENTION OF RECORDS

All laboratory billing records will be retained by the hospital, on site, for two years, and after two years, they may be stored elsewhere, microfilmed for access indefinitely, or otherwise archived for speedy retrieval as described in existing policies in the Information Management Plan or in billing policies. (Note: The current hospital retention policy provides for Medical Records to be retained 25 years and billing records for a minimum of seven years.) The most current hospital billing record retention policy takes precedence over this sub-section of this document. The billing department maintains laboratory billing records.

X. COMPLIANCE AS AN ELEMENT OF A PERFORMANCE PLAN

The promotion and adherence of the Compliance Plan is an element in the yearly evaluation of the performance of all hospital personnel involved with the ordering, billing, and reimbursement of federally funded programs. Programs regarding new compliance policies and procedures will be attended by applicable hospital personnel whenever possible. As information becomes available, inservices will be provided by the Compliance Officer, Laboratory Director, or designee for any health care provider involved with reimbursement for laboratory testing.

A. EMPLOYEES ARE TO BE INFORMED.

Hospital employees involved in marketing, sales, and billing of laboratory services will be required annually to review the current Laboratory Compliance Plan. This inservice will also require the health care worker to sign a statement acknowledging their understanding of the following:

1. The compliance plan and legal requirements applicable to their functions.
2. That strict compliance with these policies and requirements is a condition of employment.
3. That the hospital may take disciplinary action up to and including termination for intentional and/or continuous violations of these policies or requirements.
4. That it is the duty of all health care providers to educate cworkers regarding compliance policies and to police for any problems or violations.
5. That they are responsible to make known any problems or violations to the Compliance Officer, so that correction may be made as soon as possible.

B. DESIGNATION OF A COMPLIANCE OFFICER:

The hospital Board of Directors has designated a Corporate Compliance Officer. The duties are described in the official job description contained

in the Appendix section herein. The Laboratory Director or designee will work with the Corporate Compliance Officer and Corporate Compliance Committee to assure that the following functions are performed:

1. Development of compliance policies and standards.
2. Supervision and monitoring the laboratoryôs compliance activities.
3. Targeting to achieve and maintain compliance.
4. Development of and distribution to appropriate individuals all written compliance policies and procedures to include, at a minimum, the issues addressed in the Federal Register/Vol. 62. No. 41/Monday, March 3, 1997/Notices.

The designated laboratory personnel will work under the supervision of the Laboratory Director with close coordination with the hospital Corporate Compliance Officer who has authority by the Board of Directors to undertake and comply with these responsibilities, with open access to Senior Management and the Board of Directors as necessary in this regard.

The Laboratory Director or designee will be an active member on a multidisciplinary team that functions as the Corporate Compliance Committee.

C. EDUCATION AND TRAINING

Annually, and as often as otherwise deemed necessary, a Medicare Compliance Program will be scheduled providing compliance and ethics training for all employees involved in billing, sales, marketing, specimen collection, and test ordering. This training will:

1. Emphasize the hospitalôs commitment to compliance with all laws, regulations, and Federal and State guidelines. Use a variety of teaching methods to ensure that all employees and other health care workers involved in ordering, billing, and reimbursement fully comprehend the implications of failing to comply with the laboratoryôs compliance plan and all applicable health care program requirements.

2. Reinforce the fact that strict compliance with the law and laboratory policies is a condition of employment (if applicable) and that failure to comply may result in disciplinary action, including termination.

3. Remind sales and marketing personnel they are prohibited against offering remuneration in return for referrals.

4. Enforce the fact that the laboratory will take appropriate disciplinary action up to and including termination for violations of

the laws or failure to report a potential violation by another employee, supervisor, or outside contractor or provider.

5. The laboratory supports the need for periodic continuing education programs to ensure that the laboratoryôs personnel are knowledgeable and productive. Techs will be encouraged to attend and be actively involved in continuing education programs and their specific Registry.

Laboratory Compliance Program Commitment:

The Clark Memorial Hospital Laboratory is committed to compliance with all laws, regulations, and guidelines governing federally funded health care programs.

D. COMMUNICATION

1. Access to the Compliance Officer

The Compliance Officer will be available providing an open line of communication regarding the implementation and operation of the compliance program assuring complete anonymity and non-retribution for any one discussing compliance issues. Any questions regarding Medicare compliance issues should be addressed with the Laboratory or Compliance Officer as soon as practical in person, by phone, or by written message. Participants involved with the process should not guess regarding any questionable issue but consult with the Compliance Officer who, in turn, will clarify the question. The Medicare intermediary and/or HCFA may need to be contacted by the Compliance Officer for clarification.

2. Hotline ï (812-280-2580)

Those needing to give or receive compliance information may contact the Laboratory Director or the Compliance Officer directly. The Compliance Office Hotline will be posted prominently in appropriate areas. Calls regarding questions and/or anonymous reports of suspected misconduct will be encouraged. Written messages may be received as addressed to the Compliance Officer. Matters reported to the Compliance Officer that suggest violations of compliance policies or legal requirements will be investigated immediately to determine their validity the corrective action required for their solution.

E. AUDITING AND MONITORING

Audits shall be designed and implemented to ensure compliance with the laboratoryôs compliance policies, the laboratoryôs compliance plan, and all applicable Federal and State laws. These audits may address contracts, competitive practices, marketing material, CPT/HCPCS coding, and record keeping. Auditing procedures **may** include:

1. On-site visits

2. Interviews with personnel involved in:
   a. Management
   b. Operations
   c. Billing
   d. Sales
   e. Marketing, competitive practices
   f. Notices and disclosures to Physicians
   g. Requisition Formats
   g. Pricing
   h. Personnel involved in ordering
   i. Policy/Procedure review
   j. Review of state and federal laws
   k. Coding
   l. Contracts
   m. Test Information
   n. Record Keeping
   o. Other related activities

3. Reviews of written materials and documentation used by the laboratory.

4. Trend analysis studies.

Note: The Laboratory will incorporate corporate compliance monitors in their annual Quality Program when problems or trends are detected or other needs dictate this to be appropriate. This Program is approved by the Laboratory Administrative and Medical Directors and submitted to the Corporate Compliance Officer / Quality Committee for approval.

Audit reports shall be prepared by the Laboratory Director or designee under the guidance of the Laboratory Director, and submitted to the hospital Board of Directors through the Corporate Compliance Officer with documentation.

The laboratory management will review all audits and take whatever steps may be necessary to address problems and discourage recurrences. Any

problems detected will be re-monitored to ensure that corrective actions have been implemented and to monitor their effectiveness.

F. DISCIPLINARY ACTION PLAN WITH PROGRESSIVE PUNISHMENT IN WRITING

Employee of Clark Memorial Hospital:

1. Violations of laws, regulations, and guidelines, including this Compliance Plan, will be discussed with the violator by the Compliance Officer, Laboratory Director, and/or Human Resources Representative to educate the violator.

2. Continued disregard of laws, regulations, and guidelines ï employee will be subject to hospital Human Resources policies and procedures and/or reported to Federal authorities.

Physicians and other individuals authorized by law to order tests:

3. Violations of laws, regulations, and guidelines, including this Compliance Plan, will be discussed with the violator by the Compliance Officer, Laboratory Director, and/or Administrative Officer to educate the violator.

4. Continued disregard to laws, regulations, and guidelines ï violations will be reported to hospital Quality Council and/or federal authorities.

Employees will be inserviced on Ethics Compliance, the disciplinary action, and other consequences, which may ensue when individuals fail to comply with the laboratoryôs policies and/or Federal and State laws.

G. CORRECTIVE ACTION

1. **Investigating –**

The Laboratory Director and Corporate Compliance Officer will properly investigate any potential violations or misconduct. Written recommendations for corrective action will be issued as appropriate. Depending upon the nature of the problem, the investigation will include interviews and review of relevant documents, such as claims submitted, test requisition forms, and laboratory test reports.

Outside audits may be engaged. If an investigation of an alleged violation is undertaken and the Compliance Officer believes the integrity of the investigation may be at stake because of the presence of employees under investigation, the employee(s) allegedly involved in the misconduct may be removed from his/her current work activity until the investigation is completed.

In addition, the laboratory will take steps to prevent the destruction of documents or other evidence relevant to the investigation. Once an investigation is completed, if disciplinary action is warranted, it will be immediate and imposed in accordance with the hospitalôs written standards of disciplinary action.

2. Reporting

If management receives credible evidence of misconduct from any source and, after appropriate investigative inquiry, has reasonable grounds to believe that he misconduct either:

(a) Violates criminal law, or

(b) Constitutes a material violation of the civil law, rules and regulations governing federally funded health care programs, then the laboratory should report the existence of the misconduct to Corporate Compliance Officer who in consultation with legal council should follow the proper reporting mechanisms as outlined in the applicable laws and in accordance with the hospital Corporate Compliance Plan. The hotline direct to the Corporate Compliance Officer is 280-2850

3. Corrective Action

If the investigation reveals that misconduct did occur, corrective actions will be immediately initiated. The laboratory will make prompt restitution to the appropriate federally funded health care program of monies to which it has no legal entitlement and will institute such additional corrective action as its Director and Manager(s) believe will be appropriate and effective to address the responsible problem(s) and minimize the likelihood of recurrence(s).

4. Non-Employment or Retention of Sanctioned Individuals

To the extent required by law, employment will be prohibited for individuals who have been convicted of a criminal offense related

to health care or who are listed by a Federal agency as debarred, excluded or otherwise ineligible for participation in federally funded health care programs. In addition, until resolution of such criminal charges or proposed debarment or exclusion, individuals who are charged with criminal offenses related to health care or proposed for exclusion or debarment may be removed from direct responsibility for or involvement in any federally funded health care program, in accordance with applicable law and/or regulation. If resolution results in conviction, debarment or exclusion of the individual, the hospital may terminate its employment of that individual, in accordance with applicable law and/or regulation.