
THE

University of Vermont
HEALTH NETWORK

Champlain Valley Physicians Hospital

2015 LAB GUIDE GENERAL INFORMATION

September 2015 Edition

ADMINISTRATIVE TEAM

Medical Director of Laboratory..... Eric B. Gorman, M.D.

Administrative Director of Laboratory Services..... Joseph J. Wawrzynski, MBA, BSMT, FACHE,
MT(ASCP)BB, DLM^{CM}, CQA (ASQ)

SECTION SUPERVISORS:

Chemistry / Hematology..... Sharon Terry, MS, CLT

Pathology/LIS..... Helen Fusco, MT, HTL (ASCP)

Microbiology/Quality AssuranceDiane Farnsworth BA, MT (ASCP)

Point of Care Testing / Safety / Lab SupportPeter Mullen, B.S., MT (ASCP)

Blood Bank / Donor Program..... Jeannine Yanulavich, BSMT, CLT

Revised: 9/4/15
cc: Charge Tech Manual

TELEPHONE / FAX NUMBERS

General Information	562-7400
Results Inquiry:	
Clinical Fax.....	562-7415
Clinical Results	562-7400
Anatomical Pathology	562-7408
Anatomical Pathology Fax	562-7496
CPI Plaza (Diagnostic Center)	562-1043

Revised: 9/4/15

LABORATORY HOURS

LABORATORY – CLIENT SERVICES

MONDAY - FRIDAY 8AM – 5PM

ANATOMIC PATHOLOGY

MONDAY – FRIDAY 8AM – 4:30PM*

(*) All other hours – Contact Pathologist on-call through Laboratory Client Services

OUTPATIENT HOURS

CVPH

MONDAY – FRIDAY 6AM – 6PM

SATURDAY CLOSED

SUNDAY CLOSED

CPI PLAZA

MONDAY – FRIDAY 6AM – 6PM

SATURDAY 6AM – 2PM

SUNDAY CLOSED

Revised: 9/4/15

HOW TO COMPLETE OUTPATIENT LABORATORY REQUISITIONS

All outpatient Laboratory tests must be ordered on a Laboratory requisition. Verbal orders will be accepted, but must be followed by the appropriate Laboratory requisition that is properly filled out within 48 hours. This is a standard requirement by the New York State Clinical Laboratory Evaluation Unit.

Mandatory Information Required:

1. Patient's full name, date of birth, social security number and sex
2. Patient's address and phone number
3. Patient's primary and secondary insurance information
4. Patient under 18 years, parent/guardian's name and address and social security number
5. Authorization and assignment signature
6. Fully legible name of authorized HCP ordering test
7. Diagnosis / Symptoms / Medical necessity / ICD-9 code
8. Test(s) ordered
9. Specimen description

****IT IS ALSO VERY IMPORTANT TO INCLUDE THE DATE AND TIME OF SPECIMEN COLLECTION****

1. If you need a test done STAT please write in "Comment" section.
2. If you need results called or faxed to your office, please record this on the requisitions and supply the phone number.
3. If another physician requires a copy of the laboratory report, **please print the first and last name of the physician on the requisition in the "copy to" box.**
4. If the information described above is not provided, a request will be made for a corrected requisition. Testing will be delayed until the appropriate information is provided.

NOTE: For certain infectious diseases (e.g., malaria), travel or other risk factors should be listed.

Revised: 9/4/15

CRITICAL LAB VALUES TO BE CALLED (2 Pages)

CHEMISTRY DEPARTMENT

<u>TEST</u>	<u>LOW</u>	<u>HIGH</u>
pH	<7.20	>7.60
pO ₂	<40 mmHg	
pCO ₂	<20 mmHg	>70 mmHg
CO ₂	<10 mmol/L	>40 mmol/L
Ca	<6.0 mg/dL	>13.0 mg/dL
Glucose	<50 mg/dL	>400 mg/dL
K	<2.8 mmol/L	>6.0 mmol/L
Na	<120 mmol/L	>160 mmol/L
Mg	<1.0 mg/dL	>5.0 mg/dL
CKMB		>10 ng/mL
Troponin I		≥2.0 ng/mL
Ionized Calcium	<0.8 mmol/L	>1.8 mmol/L
Carbon Monoxide		> 20%
Lactic Acid		>2.1 mmol/L

DRUG LEVELS GREATER THAN

Acetaminophen	>150 µg/mL	Salicylate	>30 mg/dL
Carbamazepine	>20 µg/mL	Theophylline	>25 µg/mL
Digoxin	>3.0 ng/mL	Tobramycin(peak)	>20 µg/mL
Gentamicin(peak)	>20 µg/mL	Tobramycin(trgh)	>1.5 µg/mL
Gentamicin(trgh)	>1.5 µg/mL	Valproic Acid	>150
µg/mL			
Lithium	>2 mmol/L	Vancomycin(peak)	>40 µg/mL
Phenobarbital	>60 µg/mL	Vancomycin(trgh)	>25 µg/mL
Phenytoin	>40 µg/mL		

BLOOD BANK

- Compatible blood/blood components cannot be provided within the expected turn-around time due to antibody problems or due to lack of availability.
- A patient who was recently transfused (within last 3 months) develops a positive direct antiglobulin test, which could indicate a delayed hemolytic transfusion reaction.

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HEMATOLOGY DEPARTMENT

<u>TEST</u>	<u>LOW</u>	<u>HIGH</u>
Fibrinogen	<100	>650 mg/dL
HCT	<22.5%	>60%
HGB	<7.5 gm/dL	>20 gm/dL
PLATELET	<50,000 /uL	>1,000,000/uL
INR		≥5.0
PTT		>93 seconds
WBC	<2,500 /uL	>30,000 /uL

- Elevated WBC count in CSF.
- Presence of malignant cells, blasts or microorganisms in body fluids and blood smears.
- Presence of pathologic crystals (cystine, leucine, or tyrosine) in the urine of pediatric patients up to 3 months old.
- Positive urine reducing substances on pediatric patient in the absence of a positive glucose result.

MICROBIOLOGY DEPARTMENT

- Positive results from Gram's stain or culture from blood, cerebrospinal fluid, or body cavity fluid; or positive India ink preparation.
- Positive rapid antigen detection by agglutination tests for Cryptococcus.
- Positive results from acid-fast bacillus stain or culture.
- Salmonella, Shigella, Campylobacter or Shiga-toxin positive E. coli (e.g., 0157) on stool culture.
- Presence of malarial parasites.

REFERENCE RANGE (NORMAL VALUES)

Reference ranges are guides rather than absolute indicators of health and disease. Values for healthy persons often overlap with values for persons afflicted with disease. Laboratory values may vary because of methodological differences and/or modes of standardization which exist between various laboratories.

Therapeutic and toxic drug ranges are those commonly accepted on the basis of current knowledge and recommended values of current reagent manufacturers.

REFERENCE:

1. Laboratory Test Handbook with Keyword Index, 1988.
2. MLO, Clinical Laboratory Reference, 20th Edition 1993.
3. MAYO Medical Laboratories Interpretive Handbook for Diagnostic Laboratory Tests, 1997.

Revised: 9/4/15

CRITICAL TESTS

Results will always be called to Provider. Expected turnaround time from time of specimen receipt in Lab to time of phoned results in parentheses.

- ▶ Frozen Sections (*20 minutes*)
- ▶ Immediate Read Cytology (*varies according to specimen submitted*)
- ▶ Fetal Fibronectin (*45 minutes*)
- ▶ Intraoperative PTH (*30 minutes*)

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CALLING CRITICAL RESULTS

For our regular inpatient and outpatient clients, all critical results are to be called to the nursing unit or the healthcare provider within 5 minutes of verifying the result.

Note: For clients whom we serve as a reference lab, the critical value is called to the client. The same time limits apply. Our current client is Elizabethtown Community Hospital.

- 1) The Elizabethtown Community Hospital can be contacted 24/7. Call their lab at 873-3050. However, at some hours there may not be an available tech to take the result. Leave a message with your name & CVPH Laboratory, that we attempted to call a critical result and will now call the provider directly. Make the call to the indicated provider/clinician.

Deliver and document the critical value(s) as described in this document.

When calling critical results to the nursing units, technical staff members must request to speak to an RN. After the results have been given to the RN, the RN must read back the results for verification. Technical staff is to document first initial and last name of the RN and the time of the call in the LIS.

When calling critical results to a healthcare provider's office, staff must ask for a read back from the individual taking the result. Additionally, staff is to document to whom the result was given and the time of the conversation.

When the healthcare provider or his/her cross coverage is unavailable to take a critical result, it is the responsibility of the lab management staff to call the patient. The following script is to be followed when contacting a patient with critical results.

If the patient is a minor child or an adult who is not competent to understand the script, it is acceptable to read the script to a parent or caretaker. Before reading the script to a caretaker or parent, please ask them to verify the patient's date of birth. Document on the interim report that the date of birth has been verified.

If at any time the supervisory staff is uncertain about whether to contact a patient, they are advised to consult with the pathologist on call.

1. "May I speak with _____ (*patient name*).
2. My name is _____ (*Supervisor*), and I'm calling from the laboratory at CVPH. I have tried to contact _____ (*healthcare provider's name*) to give him/her the results of your _____ (*test name*), but have been unsuccessful.
3. Your test result is outside of normal limits and we are recommending that you go to the nearest emergency department for evaluation. Upon arrival in the emergency department, please ask them to contact the CVPH laboratory at 518-562-7400 for your test results.
4. We will continue to try reaching your healthcare provider."

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Confirmation of Specimen Identification Form

Irreplaceable Specimen(s) or Tissue(s)

Use of Confirmation of Specimen Identification Form:

This form must be completed to verify the accuracy of information of irreplaceable specimens.

This form will be used for the following limited purposes: **(Please circle one)**

- a) The test is critical, and delay for a new specimen could compromise care
- b) Clinical reasons for avoiding a second collection exist
- c) The patient is unavailable for a second collection

Specimen type: _____

Specimen labeled as: _____

Requisition labeled as: _____

Patient location: _____

Correct Specimen Information:

I affirm the accuracy of the corrected information provided and request that the specimen(s) be analyzed. The process of obtaining a new specimen(s) could have a negative impact on the condition of the patient or is not possible at this time.

PRINT NAME: _____ DATE: _____ TIME: _____

SIGNATURE (Physician or Physician responsible for the patient at time of correction)

(If physician is not available, physician's name must still be printed)

PRINT NAME: _____ DATE: _____ TIME: _____

SIGNATURE (Collector)

NAME OF LAB PERSONNEL ACCEPTING CORRECTED SPECIMEN

Revised: 9/4/15

CRITERIA FOR ACCEPTABLE SPECIMENS

Specimens can be accepted and tested, if they meet the following guidelines:

1. LABELING – all specimens and aliquots must be received with a label that contains:
 - the patient's full name
 - at least one other unique identifier (i.e., medical record number or date of birth)
 - date and time of collection (acceptable if on requisition only)
 - identity of the individual collecting CVPH drawn samples and all Blood Bank specimens
 - all aliquots must bear the identity of the individual preparing the aliquot
2. OUTPATIENT (OP) LABORATORY REQUISITION – all OP specimens must be accompanied by a complete requisition. The form **must** contain the following:
 - patient name
 - patient sex
 - patient date of birth
 - name of physician or person legally authorized to order testing
 - tests requested
 - diagnosis
 - time and date of specimen collection, when specimen is accompanying requisition
 - source of specimen, when appropriate
 - clinical information, when appropriate
 - completed consent form, when appropriate
3. SPECIMEN CONTAINER – the exterior must be intact and free of contamination by blood or body fluids. If the specimen is contained in a syringe, the needle must have been removed and replaced with a firmly sealed cap.
4. VOLUME OF SPECIMEN – the appropriate volume of specimen must be collected to meet testing requirements.
5. COLLECTION DEVICE/PRESERVATIVE – specimens must be submitted in the proper collection device and with the correct preservative.

Revised: 6/1/16

CRITERIA FOR REJECTING SPECIMENS

Any specimen arriving in the laboratory that fails to meet criteria will be withheld from analysis until the deficiency has been resolved.

Never discard any rejected specimen before its normal discard date (6 days for blood specimens, 3 days for non-blood specimens). Whenever possible, a replacement specimen should be obtained. If one cannot be obtained, the clinician must be notified.

Unstable specimens/analytes or unique samples that cannot be recollected may need to be accepted even though the specimen is suboptimal. These specimens would include:

- arterial blood gases (ABG)
- CSF or other body fluids
- capillary/fingerstick specimens
- cord blood samples
- tissues
- culture specimens obtained prior to initiation of antibiotic therapy
- pediatric nasopharyngeal washings
- Pap smears

The original sample cannot be relabeled. All rejected specimens are to be retained in a designated area of the refrigerator for 6 days if blood specimen, 3 days if non-blood specimen.

In the event that a specimen is unstable, unique or cannot be recollected, the physician and the individual who collected the sample (if not the same person) must certify in writing that (1) the specimen is irreplaceable and (2) the correct specimen information is accurate before the sample can be processed. (See example of the *Confirmation of Specimen Identification Form*). If the sample was mislabeled, the incorrect label cannot be removed. The correct LIS label can be placed on the sample. It is imperative that technical staff be made of aware of the labeling discrepancy. Following the completion of the requested assay, technical staff must add a disclaimer to the results by appending REQT (Specimen labeling issue, assay performed at the request of the Healthcare Provider).

Documentation in the LIS must occur whenever the *Confirmation of Specimen Identification Form* is utilized to accept an unlabeled or mislabeled specimen. The signed form will be retained in the laboratory and a Laboratory Occurrence Management Form must also be filed.

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PATIENT IDENTIFICATION

The phlebotomist will use two patient identifiers before drawing blood:

In an Outpatient setting:

Ask the patient a direct question, "What is your name, sir/madam?" and "What is your date of birth?" Compare the information stated by the patient with information on the computer labels or with the requisition slip.

Nursing home patients must also be identified using two unique identifiers. This is usually name and date of birth. If the patient/resident is unable to provide this information, it should be provided by a nursing home employee, unless a valid band is worn by the patient.

In an Inpatient setting:

Compare name and Medical Record # on the patient's identification bracelet with that on your labels or requisition. This information must be identical! Usually the ID bracelet is on the patient's wrist. In some cases, it may be on the patient's ankle. Request a nurse to identify a patient who does not have an identification bracelet. A bracelet should be on the patient's wrist except in cases when it is not feasible. In this case, have the nurse taking care of the patient identify the patient for you. Make a note on the requisition of the nurse who identified the patient.

Patient who is unconscious, too young, mentally incompetent, or does not speak the language of the phlebotomist:

Ask the nurse to identify the patient by name and Medical Record # or date of birth. Compare this data with the information on the request form. For outpatients, a relative or friend may be asked to identify the patient by name and date of birth.

Procedure for identifying Unidentified Emergency Patients:

The patient must be positively identified when the specimen is collected. The unidentified emergency patient is given a temporary designation until positive identification can be made. In all cases, the name and hospital number of the emergency identification are attached to the patient's body either by wristband or some similar device.

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REFERRAL OF SPECIMENS

Patients may go the CPI Plaza, 89 Plaza Blvd., Plattsburgh, NY, or directly to the hospital for blood & urine specimen collection or specimen drop-off. The following list of tests cannot be collected at the Plaza, please direct your patient to the hospital to be collected:

- Glucose Tolerance Test
- Sweat Chloride
- STAT Requests
- Arterial Blood Gases
- Cortrosyn Stimulation Testing

Catecholamine collection is performed only at the Donor Blood Center by appointment only (562-7406).

All other specimens are considered procedures, such as skin and conjunctival scrapings, throat swabs, Tzanck preps, nasopharyngeal swabs, (e.g., for B. pertussis), lavage for viruses that are best performed by the ordering clinic or ward.

In the event a clinic cannot perform procedures, patients in the future will be referred to the CVPH Emergency Care Center Fast Track, between the current operating hours of 09:00AM to 10:00 PM, Monday - Sunday. If a true emergency exists beyond those hours, consideration for an emergency room visit should be given.

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SPECIMEN COLLECTION

The laboratory provides staff to assist in the collection of venous blood samples. Some nursing units collect their own samples and require less assistance. Other units rely solely on the laboratory. In either instance, the laboratory will respond to requests for assistance on either a scheduled or STAT basis as described below.

- A. Blood collection schedules: There are five ways to request blood draws
1. Early AM rounds are completed between 0500 - 0700.
 2. Periodic routine rounds are scheduled after AM rounds, until 2300 and as needed during 3rd shift.
 3. Timed draws are scheduled as requested.
 4. STAT requests will be collected within 20 minutes of lab notification
 5. The majority of Laboratory tests are normally scheduled for early 5AM draws.
- B. All specimens submitted to the Laboratory will be labeled in ink with:
1. Patient's full name
 2. Medical record number or date of birth
 3. Location
 4. Date collected
 5. Time collected
 6. Initials of collection personnel for blood specimens for all specimen types. Hospital information system sign on for blood cultures.
 7. Site / source of specimen as appropriate.

NOTE: The Medical Record number is required for all Inpatient specimens.

- C. Specimens submitted on slides:
1. Slide must be labeled in pencil.
 2. Slide must have patient's full name and medical record number or date of birth.
 3. Slide container must be labeled with all the information listed in Item B above.

If the information described above is not provided, the specimen will be rejected and the nursing unit or other area initiating the request will be informed of the error. A request will be made for a corrected specimen. If specimens are not collected according to required procedures, a staff member will notify the nursing unit. If the patient is an outpatient, the attending physician's office will be notified. Recommended collection procedure may be found listed in the individual test section. Hemolysis and/or lipemia free specimens are required for certain procedures. If testing is performed on hemolyzed or lipemic specimens, a notation will appear on the report form. Any other observed interfering substance will also be noted on the report form.

- ☞ Specimen labeling must be on the actual sample container, not on an over wrap container or bag.
- ☞ Specimens must be submitted in solid sided, screw capped containers.
- ☞ Baggies are not acceptable.

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SPECIMEN CONTAMINATION

Requisitions or other paper accidentally contaminated with specimens should be discarded into an appropriate container and a new requisition form made out. Specimen containers, whose external surface becomes contaminated, should be decontaminated in its entirety with an EPA approved hospital disinfectant.

Standard Precautions

All specimens are presumed to be potentially infectious and are handled following “Standard Precautions.”

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SUPPLIES FOR PHYSICIAN OFFICES

The CVPH Laboratory provides a variety of collection supplies to assist clinicians in obtaining samples for laboratory testing in both the clinical and anatomic pathology labs. An order form for supplies may be obtained by calling the laboratory at 562-7400.

It is the understanding that supplies requested are used for the sole purpose of sending samples to the CVPH laboratory. As part of the federally mandated compliance program, the laboratory may periodically audit the relationship of supplies requested to specimens received.

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ANATOMIC PATHOLOGY (AP)

The Surgical Pathology Laboratory is located on the 3rd Floor of the Medical Arts Building. The Supervisor is Helen Fusco, M.T., H.T.L (ASCP). The telephone extension is 7756. The hours are 0800 to 1630 for operative function and 24-hours a day for consultation.

All specimens must be submitted to Surgical Pathology accompanied by a completed requisition, including relevant history and pre-operative diagnosis. Responsibility for providing all required information rests with the clinician requesting the consultation. Please consult the test menu for appropriate fixatives and transport media.

The results of histologic evaluation are available on the day following submission for most biopsy cases, provided the specimen is received prior to 1500. Large specimens requiring additional fixation and complex or difficult cases may take longer.

Specimens submitted for frozen section after the operating hours must be scheduled with pathologist on call three hours prior to the procedure.

Revised: 6/20/17

AP - AUTOPSY SERVICE

Routine autopsies are performed Monday - Friday between 08:00 and 16:30. The Autopsy Consent Form and patient's chart must be submitted to the pathologist performing the autopsy. The attending physician will be notified of the date and time the Autopsy is to be performed. Requests for autopsies outside of these hours will be considered on a case by case basis.

Revised: 9/4/15

AP - CONSULTATION CASES

Patients referred to CVPH Medical Center for treatment of conditions diagnosed in other facilities must be accompanied or preceded by the pertinent report, microscope slides and insurance/billing information. Responsibility for arranging the review of outside slides by CVPH Staff Pathologists rests on the physician who will carry out the treatment.

Revised: 9/4/15

BLOOD BANK (BB)

The Blood Bank is located on the 3rd floor of the Miner Medical Arts Building. The Supervisor is Jeannine Yanulavich. The telephone extension is 7404 (7406 for the Donor room). Transfusion services are available 24 hours per day, 7 days per week.

Indications for Transfusion

Blood product transfusions should only be given when medically necessary.

Revised: 9/4/15

BB - AUTOLOGOUS BLOOD

Autologous Blood is issued as packed cells. If both autologous and homologous blood have been crossmatched to a patient, the autologous blood will always be issued first.

Revised: 9/4/15

BB - EMERGENCY (UNCROSSMATCHED) BLOOD PROTOCOL

For an order of UNCROSSMATCHED blood, call the Blood Bank (Ext. 7404) indicating the need for Uncrossmatched blood, stating the number of units needed. This will give the Blood Bank staff an opportunity to begin processing the necessary paperwork before transport arrives for the blood.

The UNCROSSMATCHED blood will be issued with a fluorescent orange “UNCROSSMATCHED BLOOD” sticker attached to the face of the unit. The “Emergent Release of Blood Products” form indicating the status of the bloods issued and listing the donor units will accompany the Uncrossmatched units of blood. The Physician MUST SIGN the release form and return the form to the Blood Bank as soon as possible.

In cases of extreme emergency where there is not sufficient time to perform a blood type, O Negative packed cells will be released.

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BB - FRESH FROZEN PLASMA

A call to the Blood Bank for Fresh Frozen Plasma (FFP) should be made 1 hour before the expected infusion (this is the time required to thaw the frozen plasma).

Fresh Frozen Plasma should be issued as ABO compatible (the Rh factor is insignificant). The FFP does not need to be crossmatched.

The sooner FFP is infused after being thawed, the greater the survival of the labile coagulation factors. FFP must be used within 24 hours after being thawed or it must be discarded (wasted).

Revised: 9/4/15

BB - GUIDELINES FOR BLOOD PRODUCT TRANSFUSION (2 Pages)

Revised: 9/4/15

PRODUCT	GUIDELINES
Leukoreduced Packed Red Blood Cells	<p>A. Acute blood loss:</p> <ol style="list-style-type: none"> 1. Hgb <9 gm/dl with active bleeding 2. Hgb <9 gm/dl with systolic BP < 90 or pulse >100 3. Estimated blood loss >750cc <p>B. Chronic anemia</p> <ol style="list-style-type: none"> 1. Symptomatic chronic anemia 2. Asymptomatic chronic anemia with Hgb <7 gm/dL <p>C. Pre-operative or operative surgical patient</p> <ol style="list-style-type: none"> 1. Pre-operative Hgb <7 gm/dL 2. Major blood-letting operation and pre-op Hgb <10 gm/dL <p><u>NOTE:</u> Check post-transfusion Hgb within 24 hours</p>
Washed Red Blood Cells	<p>A. History of anaphylactoid transfusion reactions in IgA deficient patient</p> <p>B. History of severe allergic transfusion reactions</p> <p>C. Paroxysmal Nocturnal Hemoglobinuria</p>
Frozen Deglycerolized Red Blood Cells	<p>A. Patients with rare blood types or with multiple antibodies</p> <p>B. Red cells for IgA deficient recipients</p>
Autologous Red Blood Cells	<p>The use of autologous red blood cells should be considered for any elective surgical procedure for which it is necessary to transfuse at least 2 units of packed red blood cells in greater than 10% of the cases.</p> <p>Surgical procedures for which there is a general agreement that autologous blood techniques are indicated include:</p> <ol style="list-style-type: none"> 1. Intra-abdominal vascular procedures 2. Open heart surgery 3. Total hip replacement 4. Total knee replacement 5. Scoliosis repairs 6. Radical prostatectomy <p>Surgical procedures which may indicate a need for autologous techniques include:</p> <ol style="list-style-type: none"> 1. Laminectomy 2. Hysterectomy
Platelets	<p>Standard adult does is 6 units pooled or 1 plateletpheresis unit</p> <p>A. Platelet count <20 K/uL</p> <p>B. Platelet count <50 K/uL with active bleeding</p> <p>C. Platelet count <70 K/uL with surgery anticipated</p> <p>D. Platelet count <100 K/uL with surgery anticipated in critical area (brain,eye)</p> <p>E. Continued bleeding in patient with prolonged bleeding time caused by platelet abnormality</p> <p><u>NOTE:</u> Check platelet count at 1 hour post-transfusion.</p>
Irradiated Red Blood Cells and Platelets	<p>A. Patients who are being prepared for or have had a bone marrow stem cell transplant</p> <p>B. Patients with congenital immune deficiency syndromes</p> <p>C. Neonates receiving exchange transfusions</p> <p>D. Fetuses receiving intrauterine transfusions</p> <p>E. Patients receiving directed donor unit from any relative</p>

PRODUCT	GUIDELINES
	F. All granulocytes used for transfusion G. Patients with leukemia, non-Hodgkins lymphoma and Hodgkins disease H. Patients with neuroblastoma or glioblastoma
Fresh Frozen Plasma	Standard adult dose 2 units A. Treatment of coagulopathy due to deficiency of procoagulant other than factor VIII or fibrinogen as indicated by any of the following: <ol style="list-style-type: none"> 1. Active bleeding with PT > 15 seconds and/or APTT > 40 seconds. 2. Preoperative administration with PT > 15 seconds and/or APTT > 40 seconds. 3. Prophylactic administration in patients in whom a bleed may cause serious clinical sequelae with PT > 15 seconds and/or APTT > 40 seconds. B. Reversal of coumadin anticoagulation if vitamin K cannot be used (vitamin K reversal usually occurs within 12-24 hours) C. Treatment for TTP, HUS or HELLP D. Treatment for DIC E. Treatment for antithrombin III deficiency if antithrombin III preparation not available. F. Life threatening hereditary angioedema <u>NOTE:</u> Check PT/APTT post-transfusion within 4 hours.
Cryoprecipitate	Standard adult dose is 10 units. A. Hypofibrinogenemia: <ol style="list-style-type: none"> 1. Active bleeding and fibrinogen \leq <input type="checkbox"/>100 mg/dl 2. Prophylactic administration in patients in whom a bleed may cause serious clinical sequelae and fibrinogen \leq <input type="checkbox"/>100 mg/dl. B. Dysfibrinogenemia C. Von-Willebrand's disease not treatable with DDAV D. Hemophilia A not treatable with DDAVP E. Factor XIII deficiency F. Uremic bleeding unresponsive to DDAVP G. Fibrin glue <u>NOTE:</u> Check fibrinogen level post-transfusion
Red Blood Cells Lacking Hemoglobin S	A. Exchange transfusions B. Consider for infants < 1 year of age C. Sickle Cell Disease
CMV Negative Red Blood Cells	A. Pregnant women and their fetus B. Low birth weight infants C. Marrow transplant recipients D. Solid-organ transplant recipients E. Severely immuno-suppressed recipients F. HIV infected patients <u>NOTE:</u> Transfusion of leukoreduced red cells have been shown to reduce the risk of transfusion transmissible CMV and should be considered as an alternative to CMV negative red cells.

Revised: 9/4/15

BB - PATIENT SAMPLE COLLECTION

Blood samples submitted to the Blood Bank for testing must be properly labeled or they will not be accepted.

The specimen must be collected in an EDTA (pink) tube. The individual collecting the sample must positively identify the patient and before leaving the bedside **MUST label the blood sample tubes with:**

- 1) Patient's full name (no initials or nicknames)
- 2) Medical Record number, social security number or date of birth
- 3) Date of collection
- 4) Time of collection
- 5) INITIALS of individual collecting the blood sample.

Please bear in mind that the majority of Fatal Transfusion Reactions are not due to incorrectly matched blood or immune antibodies, but rather are due to CLERICAL ERRORS, ESPECIALLY ERRORS OF IDENTIFICATION.

Revised: 6/1/16

BB – PLATELETS

Platelets are transfused as a platelet pheresis (equivalent to 6-8 platelet concentrates).

Platelets are usually available in the Blood Bank, and requests are made by calling the Blood Bank (ext. 7404) and indicating the patient, number of units required and urgency of the transfusion.

Platelets are stored at room temperature and must be continually rotated on a rotator until infusion. Platelets should be infused as quickly as possible after they have been released from the Blood Bank and must not be stored prior to transfusion.

Revised: 9/4/15

BB - POLICY FOR THE RETURN OF ISSUED UNITS OF BLOOD

If blood is issued for transfusion and then a change in the patient's clinical status or other difficulty necessitates a delay in the transfusion, the following must be adhered to:

- 1) Return the blood to the Blood Bank as soon as possible, but always before 30 minutes has elapsed since issuance. Blood stored at 1°C to 6°C warms to 10°C in about 30 minutes at room temperature. Therefore, the blood transfusion must be either started or returned to the Blood Bank within 30 minutes from the time the unit was issued.
- 2) The entrance ports to the blood container must not have been penetrated or entered in any way so that sterility can be assured.
- 3) If the above conditions have been met, the blood may be brought back to the Blood Bank and be re-issued again when transfusion becomes possible.

Revised: 9/4/15

BB - RELEASE OF CROSSMATCH BLOOD

Blood that is crossmatched will be held for 72 hours and then released.

One person may pick up blood for ONLY one patient at a time. Only one unit of blood will be issued per patient except in an emergency.

Revised: 9/4/15

BB - REQUEST FORM

Requests for Blood Bank testing are made in the Hospital Information System through Order Entry, or by completing the Blood Bank Request forms.

Blood Bank Request forms should contain the following information in order to be accepted:

- 1) Patient's full name (no abbreviations)
- 2) Patient's Identification Number (medical record or social security number)
- 3) Requesting physician
- 4) Date and time ordered
- 5) Urgency, i.e., STAT, Routine, Pre-Op must be marked on form
- 6) Product / Service requested
- 7) When ordering a blood product, indicate date & time needed.

In addition, if a blood product is ordered, the most recent lab value required for monitoring the need for that blood product and the reason for the Red Cell / Platelet / Plasma transfusion must be indicated in the appropriate area on the Blood Bank Request form.

It would also be very helpful if the two questions on patient history were completed, namely: Patient History of Previous Blood transfusions and patient History of Reaction to Transfusions.

Pre-Admission Surgical Patients

It is the policy of the Blood Bank to accept Blood Bank samples for Type and Screen or Crossmatch procedures up to 30 days prior to a patient's surgical date, provided:

- 1) the patient has not been transfused within the past three months
- 2) the patient has not been pregnant within the past three months

If the patient has either been transfused or pregnant within the past three months, the Type and Screen or Crossmatch procedures must be performed on blood samples collected within three days of the surgical date. It is important that the blood sample used for compatibility testing represents the patient's current immunological status. Recent transfusion or pregnancy may evoke or stimulate production of unexpected antibodies.

All pre-admission patients requiring Blood Bank testing will be required to complete a form which will document that they have not been recently transfused or pregnant. This form will need to be completed at the time the patient has his or her blood drawn. The patient's transfusion and pregnancy history is reconfirmed and documented on the form by the OR staff on the day of surgery.

If a Type and Screen or Crossmatch is ordered, the blood is typed and the antibody screen will be performed at the time the Blood Bank receives the sample and the sample is then retained until the day of surgery. The crossmatch is performed the day prior to surgery. In this way, any unexpected antibodies can be identified and blood made available at the time of surgery.

The Blood Bank cannot accept testing results for Type and Screen or Crossmatch procedures performed at testing labs other than the CVPH Blood Bank since the samples would not be available for crossmatching if required.

Revised: 9/4/15

BB - TRANSFUSION POLICY

Type specific blood (blood of the same group and Rh as the patient) is generally issued for transfusion. However, if the required group and Rh are not available, ABO compatible packed red cells may be utilized. Group A, Group B, Group O or Group AB packed red cells may be transfused to an AB recipient. Group O recipients **MUST** receive Group O blood. Group O packed cells may be transfused to a recipient regardless of the ABO type.

An Rh positive recipient may be transfused with Rh positive or Rh negative blood. An Rh negative recipient should **NOT** receive Rh positive blood except in an emergency situation and only if the patient does not have anti-D.

Informed Consent

All patients undergoing non-emergent transfusions must be informed of the risks and benefits of blood and blood components and consent to their use. The physician should discuss the possibility of blood transfusion with the patient, the risk and benefits of transfusion, the methods whereby blood transfusion may be avoided or minimized, the positive and negative aspects of receiving homologous blood, and pre-donating and receiving autologous blood. The informed consent form documents that this discussion has taken place and must be signed by the patient.

Revised: 9/4/15

BB - TRANSFUSION REACTIONS

Any adverse symptoms or physical signs occurring during transfusion of blood or its components should be considered potentially a part of a life-threatening reaction.

The individual hanging the blood should take the following actions immediately:

- 1) STOP the transfusion to limit the amount of blood infused.
- 2) Keep the intravenous line open with the infusion of normal saline.
- 3) CHECK all labels, forms and patient identification to determine if the right patient received the correct blood or component.
- 4) Report the suspected transfusion reaction to Blood Bank personnel immediately.
- 5) Complete the information on the top part of the Transfusion Reaction form and send the form to the Blood Bank as soon as possible along with the discontinued unit.
- 6) Urticaria alone does not necessitate a transfusion reaction investigation. If only urticaria occurs, the transfusion should be temporarily stopped while Benadryl is given to patient. If symptoms resolve, the transfusion may be restarted after consultation with the patient's physician.

Revised: 9/4/15

BB - URGENT ORDER FOR BLOOD

An emergency order for crossmatched blood takes approximately 1 hour to complete if the patient does not have an antibody, and if a type and screen needs to be performed. This usually requires a new blood sample to be drawn.

If a type and screen has already been performed within the last 72 hours, it takes approximately 10 minutes to crossmatch up to four units of blood.

Revised: 9/4/15

CLINICAL CHEMISTRY (Chem)

The Clinical Biochemistry section is located on the 3rd Floor of the Medical Arts Building. The Supervisor is **Sharon Terry, MS, CLT**. The telephone extension is 7192. Clinical Chemistry personnel provide twenty-four hour coverage.

General Clinical Chemistry

This section of the Laboratory operates 24-hours a day, 7 days a week. It performs all routine and STAT chemistry determinations. The laboratory is highly automated, which makes it possible for many tests to be done on micro-samples with rapid turn-around time. The bulk of routine chemistries are performed on large computer controlled profile analyzers. Blood gas analysis is also performed in this section.

Revised: 9/4/15

CHEM - CHEMISTRY TESTING SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
Chem Tests	Chem Tests	Chem Tests	Chem Tests	Chem Tests	Chem Tests
IFE/SPEP	IFE	IFE/SPEP	IFE	IFE/SPEP	
Immunology	Immunology	Immunology	Immunology	Immunology	Immunology
A1c	A1c	A1c	A1c	A1c	A1c
ANA/Pb		ANA/Pb		ANA/Pb	
Hepatitis/HIV	Hepatitis/HIV	Hepatitis/HIV	Hepatitis/HIV	Hepatitis/HIV	Hepatitis/HIV
Serology	Serology	Serology	Serology	Serology	Serology

All 3 Shifts	Shift 1 only
Beckman DXC660I	Hemoglobin A1c
AU680 Drug Screen	Routine Hepatitis Testing
Manual Testing	Routine HIV Testing
STAT HIV Testing	DiaSorin Testing
STAT HBsAg Testing	ANA
STAT HCV	Lead Testing
STAT Mono	Serology

AU680: Special Proteins, Methotrexate, Drugs of Abuse

Beckman DXC660I: Chemistry Profiles (Basic Metabolic, Comprehensive Metabolic, Cardiac and Hepatic) ACET, AMM, ETOH, Beta hydroxybutyrate, SAL, **TRPI**, DIG, DIL, GENT, PHEN, TEG, TOBR, VALP, VANC, THEO, LACT, CSF Protein and Glucose, CVE, Fe, TIBC, TRNF, CRP, HS CRP, CEA, CKMB, FSH, HCG, QHCG, LH, PROL, PSA, Free PSA, RUBL, TT3, Free T4, Free Testosterone, OV-125, AFTP (males only), Estradiol, B₁₂, Folate, TSH3, Progesterone, Myoglobin, Ferritin, Cortisol, Testosterone, BNP, PTH (routine and intraoperative), Amylase, Lipase, GGT, CK, CK-MB, LDH, Direct LDL, Lithium Magnesium Phosphors, and Uric Acid.

LIAISON: Vitamin D, Lyme (IgG & IgM total), CMV IgG, Toxo IgG & IgM, Varicella IgG, Mumps IgG, Rubeola IgG.

Manual Testing: SOSM, UOSM, STAT HIV (Backup).

Revised: 9/4/15

CHEM - GENERAL IMMUNOLOGY

This section performs routine manual serological testing by various methods. Availability is listed in the following pages.

Revised: 9/4/15

CHEM - SPECIAL CHEMISTRY / IMMUNOLOGY

This section performs procedures that include Electrophoresis, Immunofixation, Turbidimetry, and Immunofluorescence. Testing in this area is conducted weekdays from 0700 – 1530.

Revised: 9/4/15

CHEM - THERAPEUTIC DRUG MONITORING TOXICOLOGY

This section performs routine quantitation of therapeutic drugs and qualitative urine screening for drugs of abuse.

Revised: 9/4/15

CYTOPATHOLOGY

The Cytopathology Laboratory is located on the 3rd Floor of the Medical Arts Building. The Medical Director is Eric Gorman, M.D. The telephone extension is 7417. The hours are 0800 to 1630 for operative functions and 24-hours a day for consultation.

Diagnostic Cytology is that branch of Pathology which identifies physiological or pathological processes by the study of cells which have either been scraped from epithelial surfaces or which have exfoliated spontaneously into body secretions (sputum, urine, CSF, etc.). Its chief practical value is the early detection of cancer or dysplasia in asymptomatic patients and it is a useful tool in diagnosing fully developed malignancy in instances where the clinical diagnosis is obscure. It may also help to establish prognosis when malignant cells are detected in certain locations, such as body cavities. Cytology should not be omitted simply because a biopsy is planned. Occasionally, the cytology is positive while the biopsy is negative.

Fine needle aspiration service is offered for the aspiration and diagnosis of cytologic material from superficial sites (e.g., breast, lymph node, thyroid). A Pathologist and/or a cytologist will assist at a scheduled procedure during routine hours of operation. Please call telephone extension 7418 to schedule.

A variety of non-malignant conditions may be detected cytologically. Examples are trichomoniasis, viral inclusion diseases, radiation effect and Giardia lamblia infestation.

If there is a delay in delivery to the Laboratory, fixed specimens should be refrigerated.

The results of cytologic evaluation are available on the day following submission of the specimen provided the specimen is received prior to 1500. In an urgent clinical situation, a preliminary report can be available within two hours. In these circumstances, close communication with the Cytology section is required.

SUPPLIES:

The following supplies are available to physicians' offices from the Cytopathology Laboratory:

- ETOH, 50%
- ETOH, 95%
- Instructions to the Patient for urine / sputum collection
- Requisitions
- Biohazard specimen bags
- Saccamanno fluid in pre-filled containers for urine and sputum.
- Thin Prep collection vials with spatula and Endocervical brush
- Endocervical brooms
- 15 ml formalin containers

Revised: 9/4/15

HEMATOLOGY

The Hematology Section is located on the 3rd Floor of the Medical Arts Building. The Supervisor is **Sharon Terry, MS, CLT**. The telephone extension is 7192. Hematology personnel provide twenty-four hour coverage.

The Hematology Section consists of two laboratories: Routine Hematology and Coagulation

The Routine Hematology Laboratory performs all blood counts and related analyses listed on the following pages. Additional analyses are body fluid cell counts and bone marrow preparations. This section operates 24-hours a day, with many analyses available on a STAT basis.

Bone marrow biopsies are provided in conjunction with the Department of Pathology. Consultation on peripheral and marrow smears is available with the Pathologist.

The Coagulation Laboratory performs routine coagulation studies only. All of these studies are available on a STAT basis, 24-hours a day.

Specific Requirements: Hematology

Bone marrow aspirations are scheduled in Hematology. The aspiration is done by a Physician with a Lab Aide in attendance. Consent Forms must be signed and a Bone Marrow tray obtained through Sterile Processing Department (Ext. 7039). The Lab Aide is called when the tray and Physician are in the patient's room. A Lab Aide **is not** available to assist between 1600 and 0630, weekends or holidays, due to limited staffing.

Special stains may be considered following consultation with the Anatomic Pathology Department (Ext. 7418).

Specific Requirements: Body Fluids Other than Cerebrospinal Fluid

Body fluids other than cerebrospinal fluid should be collected in an EDTA anticoagulated tube for cell counts to prevent clotting of the specimen.

Revised: 9/4/15

MICROBIOLOGY (MICRO)

The Microbiology Section is located in the Miner Medical Arts Building, 3rd Floor. **The Supervisor is Diane Farnsworth, M.H.A., B.A., MT (ASCP).** The telephone extension is 7413. Regular Microbiology personnel are on duty from 0630 to 1930 most weekdays, 0630 to 1500 weekends and holidays. Twenty-four hour coverage is provided for emergency Gram stains, rapid group A strep testing on throat swabs, rapid antigen testing for influenza A & B and RSV, **C. difficile PCR testing** and specimen planting. Gram stains from positive blood cultures are read and reported on a 24/7 basis.

Microbiology Requisitions

Microbiology shares space on Outpatient Laboratory Requisitions. Inpatient tests are ordered on-line in HIS.

A special Microbiology downtime requisition is available when computer systems are down.

Specimen Collection

Most microbiology specimens should be collected by the physician or by the patient at home (stool & sputum samples). The laboratory does not have sufficient privacy for collections that require the patient to disrobe. Wound, drainage and skin scraping samples are best collected by the trained physician to ensure testing of appropriate material. The laboratory does not collect naso-pharyngeal swabs or washings required for pertussis, RSV testing or influenza testing.

The laboratory will collect blood cultures and clean catch urine for culture.

Generally, all specimens must be received in Microbiology within 1 to 2 hour(s) of collection. Swabs and other material refrigerated for up to 24 hours will be accepted. Special transport media for anaerobes and viral culture are available. Stool for parasite examination must be placed in fixation within one hour of collection. Refer to specific test pages for individual guidelines.

Revised: 9/4/15

MICRO - ANAEROBIC BACTERIOLOGY

The Microbiology Laboratory processes specimens for isolation and identification of anaerobic bacteria. Specimens for anaerobic culture must be submitted in appropriate anaerobic transport media (available in Microbiology) and should be accompanied by a specimen for aerobic culture from the same site. Specimens from non-sterile sites having anaerobic bacteria as a component of the normal flora are generally not acceptable for anaerobic culture. The processing of such specimens will be considered on a case-by-case basis.

Examples of such specimens are: Throat swab, sputum or bronchoscopic specimens contaminated with upper respiratory secretions, feces or rectal swabs, urine, vaginal or cervical swab, material from abdominal wounds contaminated with upper respiratory or GI tract secretions.

(NOTE SAYING THIS NEEDS TO BE UPDATED, NOT SURE IF I RECEIVED THE UPDATE)

Revised: 9/4/15

MICRO - ANTIMICROBIAL SUSCEPTIBILITY TESTING

Antimicrobial susceptibility testing is performed on isolated pathogens by specific site in accordance with national laboratory standards. All culture requests are understood to be "C&S" requests. (The determination to perform an antimicrobial susceptibility test on any given isolate is made in the Microbiology Laboratory, based upon identification of the isolate and the source of the culture.) Requests for additional susceptibility testing should be made by the clinician directly to the Microbiology Laboratory. We will attempt to provide additional test results as technically possible, including sending samples to another laboratory as needed. Consultation with Infectious Disease or our Pathologists may be suggested.

Antimicrobial susceptibility testing is performed routinely using an automated system, which provides a minimum inhibitory concentration (MIC) as well as conventional categories. The MIC units are reported in ug/ml. Interpretation of these values is based upon achievable drug levels in body fluids and tissues. This information can be found in various physician handbooks and in pharmaceutical literature. Organisms, which are not suitable for automated MIC tests, will be tested by the Kirby-Bauer disc diffusion method. This method provides the S, I, R category calls only.

Revised: 9/4/15

MICRO - BLOOD CULTURES

All routine blood cultures are screened for aerobic and anaerobic organisms. All organisms isolated from blood cultures are identified. Antimicrobial sensitivity tests are performed on most aerobic isolates. Certain organisms, when recovered, are suggestive of contamination from skin. These include coagulase negative Staph sp., diphtheroids, Propionibacterium sp., and Bacillus sp. However, clinical circumstances must be considered in evaluating the significance of any blood isolate.

Revised: 9/4/15

MICRO - GENERAL BACTERIOLOGY

This section receives and processes specimens for routine culture. The specimens are accessioned, inoculated and incubated. Appropriate transfers are made to isolate and identify human pathogenic bacteria, and perform appropriate susceptibility testing. The sections below give a brief description of the major sub-areas of bacteriology and the other areas that comprise Microbiology.

Revised: 9/4/15

MICRO - MISCELLANEOUS CULTURES

Specimens from normally sterile sites such as C.S.F., bone marrow, surgical specimens, joint fluids, pleural and peritoneal fluids, etc., are cultured for aerobic pathogenic organisms. Anaerobic pathogens may be detected by routine cultures; however, be aware of the special requirements for the isolation of anaerobes (see below). If an anaerobic infection is suspected, a specimen should be submitted for anaerobic culture.

Bone marrow, eye swabs, joint fluids and spinal fluids are routinely screened for fast growing aerobic pathogenic bacteria, including Haemophilus sp. and pathogenic Neisseria.

Genital tract specimens are routinely cultured to isolate Neisseria gonorrhoeae (when properly submitted) and aerobic pathogenic organisms. However, if Haemophilus ducreyi, or Gardereella vaginalis is suspected, a special request should be made. A graded gram stain is appropriate for evaluation of vaginosis as opposed to vaginal culture.

Specimens from wounds, abscesses, incisions and pus are screened for non-fastidious fast-growing aerobic organisms. If an anaerobe is suspected, a specimen must be properly submitted. See the specific anaerobic culture listings for details.

Revised: 9/4/15

MICRO - MYCOBACTERIOLOGY (ACID FAST, TB)

Mycobacteriology deals with detection, isolation and identification of acid fast bacilli Mycobacteria from clinical specimens and includes both smear and culture procedures. Specimens in Mycobacteriology commonly fall into one of six categories. These are:

- 1) Respiratory, including sputum, bronchial washings and brushings, and tracheal aspirates.
- 2) Urine.
- 3) "Sterile" pus.
- 4) Sterile body fluids, including blood.
- 5) Biopsied tissue specimens.
- 6) Stool / feces.

Category 1, 2 and 6 specimens are decontaminated with an alkali solution prior to inoculation on selective slants and liquid growth media. Category 3-5 specimens are incubated directly on a non-selective Mycobacterial culture slant. The slants are routinely incubated for 8 weeks before a final negative result is reported.

Acid fast smears (either concentrated or direct) are reported with 30 hours of receipt of sample in Microbiology. Culture updates are reported weekly after an initial 3 weeks of incubation.

Mycobacterium tuberculosis isolates will automatically be sent to NYS DOH for susceptibility testing. All other mycobacterial isolates will be sent to a referral lab for susceptibility testing only by physician request.

Revised: 9/4/15

MICRO - MYCOLOGY

This area deals with the detection, isolation and identification of fungi from clinical specimens, and includes various smears and microscopic procedures for the direct detection of fungi within clinical material, as well as cultures. Specimens for Mycology commonly fall into one of several categories.

These are:

- 1) Superficial scrapings and clippings including hair, nails, skin and mucous membranes.
- 2) Respiratory: sputum, tracheal aspirates, bronchial washings, and brushings.
- 3) Sterile body fluids.
- 4) Biopsied tissues.

Category 1 and 2 specimens are inoculated onto both selective and non-selective fungal media. Category 3 and 4 specimens are inoculated onto a non-selective fungal medium. Fungal cultures are routinely incubated for 4 weeks before a final negative result is reported. Fungal smears are reported with 30 hours. Culture updates are sent weekly. Yeast isolates are identified in the Microbiology Laboratory. Mold isolates are sent to a reference laboratory for identification.

Revised: 9/4/15

MICRO - RESPIRATORY CULTURES

Nose, naso-pharyngeal swabs, throat, sputum, bronchial and tracheal aspirations are considered respiratory tract specimens. All specimens from these sites will be screened for fast-growing aerobic pathogenic organisms and certain fastidious isolates of possible clinical significance. Screening cultures and antigen detection for group A beta Strep are also available upon request.

Examples of organisms not isolated by routine culture are: Neisseria gonorrhoeae, Corynebacterium diphtheriae and Legionella pneumophila. For information on culture of non-routine organisms, see Culture Test Listing or call Laboratory if not included.

Throat specimens are to be collected so as to avoid contamination with organisms from mouth, tongue or dentures. Throat specimens designated for group A Strep will be screened for that organism only. Throat specimens for Neisseria gonorrhoeae will be screened for that pathogen only.

Revised: 9/4/15

MICRO - SPECIAL SUSCEPTIBILITY TESTS

Tests falling into this category must be specifically requested within 72 hours of submission of the clinical specimen. Blood culture isolates are an exception to this rule, being retained for 4 weeks or longer on request. Special susceptibility tests include the following:

- 1) Testing an isolate against antimicrobials not included in our routine panels. The Kirby-Bauer (disc method) will be utilized in this case, yielding category (not MIC) results. An additional charge will be levied in such cases. In most cases, MIC determinations for antimicrobial not included in our regular panels will have to be submitted to a reference laboratory.
- 2) Testing of a patient's serum for bacteriocidal level against a clinical isolate. Specimens for such tests will be submitted to a reference laboratory.

Revised: 9/4/15

MICRO - SPUTUM SPECIMENS

Instruct the patient to remove dentures, rinse mouth and gargle with an antiseptic mouthwash, cough deeply and expectorate into a sterile container. Cap tightly and submit to Laboratory.

All expectorated sputum specimens will be subjected to macroscopic and microscopic evaluation prior to accepting the specimen for culture. The presence of foreign bodies or a WBC/squamous epithelial cell ratio of less than 20:1 will be considered grounds for rejection of the specimen based upon quality. Specimens obtained by trans-tracheal or bronchial aspiration will not be subjected to screening. Use of these collection techniques must be clearly indicated on the requisition form.

Revised: 9/4/15

MICRO - SUBMISSION OF SPECIMENS

TECHNIQUE:

Specimens for Microbiology must be collected using aseptic techniques. Contamination with extraneous normal flora from the patient's skin or with environmental organisms leads to confusing and erroneous results. Specimens must be transported to the Laboratory in sterile, leak-proof containers. We follow the Laboratory policy for acceptance or rejection of specimens. Please consult the test listing section for timing requirements for submission following collection. All specimens should be brought to the Central Processing area in the Laboratory. Laboratory personnel will accession tests as ordered and transport the specimen to the Microbiology section

AVAILABILITY:

Routine specimens may be dropped off at either the Main CVPH Campus or the CPI Plaza. Specimens brought to the CPI Plaza will be transported to the Laboratory on the Main CVPH Campus by our regular courier system. Certain specimens are required or recommended to be brought directly to the Main CVPH Campus.

1. Seminal fluid (required) - will **NOT** be accepted at the CPI Plaza.
2. We recommend drop-off at Main CVPH Campus for best turn around time for Rapid Strep, Influenza & RSV antigen testing.
3. Sputum samples must be checked microscopically before accepted. Patients who come to the main campus and wait while the sample is checked will be given a container if recollection is necessary.

REFLEX TESTING:

A throat culture screen for group A strep will be performed whenever an ordered group A strep antigen screen has tested negative. This reflex testing is in compliance with manufacturer's recommendations. Because of this requirement, we ask that 2 throat swabs be collected and submitted with each group A strep antigen test request.

Positive Cryptococcal antigen tests will be titered.

Revised: 9/4/15

MICRO - URINE CULTURES

Specimens for routine urine culture (voided and catheterized) should be submitted or hand carried to the Laboratory during regular daytime hours. Urine specimens will be cultured for the aerobic, rapid growing organisms generally involved in urinary tract infections.

Non-catheterized urine samples must be obtained by specific “clean catch” method to avoid contamination by skin, fecal or vaginal organisms.

All urine samples are cultured quantitatively and a colony count is reported. Decisions for susceptibility testing are made based on colony count, purity of the organisms found and method of collection.

Revised: 9/4/15

MICRO - VIRAL CULTURES

Specimens for viral testing must be collected and transported in special holding media, and in some cases, with rigid temperature requirements. Therefore, the laboratory should be notified in advance of any such collections so that proper arrangements can be made. Antigen detection procedures for Respiratory Syncytial Virus, Influenza A & B and Rotavirus are available in the Microbiology Laboratory.

Specimens for viral isolation are referred to a reference laboratory, except for Herpes simplex, which is cultured in the Microbiology Laboratory.

Our HSV procedure does not differentiate between HSV1 and HSV2. Also, our final test product results in a non-viable sample. Requests for HSV typing should be clearly made so the sample can be sent to a referral lab in a timely manner.

Revised: 9/4/15

POINT OF CARE TESTING (2 Pages)

Point of Care Testing at CVPH Medical Center and its satellites consists of the following:

- **Approximately 90 Roche Accu-Chek Inform 2 glucometers for bedside glucose testing are located in the following locations:**

ECC, Fast Track, ICU, SNF, Progressive Care, R5, 5 Main, R6, Pediatrics, R7, OR, Cardiac Cath Lab, Cardiology, CWC, Cardiac Rehab, ACU, Ambulatory Surgery, KDU, Radiology, CVPH Health Center, PACU, MHU, CAMHU, Wound Center, Cardiac Short Stay Unit, the Electrophysiology Lab, and the Center for Occupational Health and Wellness.

All glucometer strips and controls are ordered by nursing through the online ordering system (Med Series 4).

The laboratory oversees all quality control and maintenance. Training is a shared responsibility with Nursing.

- **Hemochron Signature Elite instruments for Activated Clotting Time testing during procedures in the following locations:**

Cardiac Cath Labs 1 and 2, Interventional Radiology, OR, and Electrophysiology Lab.

The lab oversees all quality control, maintenance and training. The individual departments are responsible for ordering controls and reagents.

- **Stool occult blood testing using Beckman Coulter Hemocult test kits in the following areas:**

Progressive Care, R5, R6, R7, ICU and ECC.

- **Gastric occult blood and pH testing using Beckman Gastrocult test kits in the following area:**

ECC

The lab oversees all quality control and maintenance. Nursing is responsible for overseeing all training.

Revised: 9/4/15

POINT OF CARE TESTING CONT'D

- EPOC Analyzers for Critical Care electrolytes, blood gases and hematocrit in the following area:

OR

The lab oversees all quality control, maintenance and training. The OR is responsible for ordering all controls and reagents.

- **ROM Plus Kits** for the detection of Ruptured Fetal Membranes in the following department:

Labor and Delivery

The lab oversees all quality control and maintenance. Training is a shared responsibility with Nursing. The Center for Women and Children is responsible for ordering all controls and reagents.

- **AVOXIMETER 1000E** for Oxy Hemoglobin and Total Hemoglobin measurement in the following department:

Cardiac Cath Lab 1

The lab oversees all quality control, maintenance and training. The Cardiac Cath Lab is responsible for ordering reagents and controls.

- **Urinalysis via dipstick** in the following areas:

Center for Occupational Health and Wellness
CVPH Health Center

- **Breath alcohol testing** in the following areas:

Center for Occupational Health and Wellness (8:00 – 4:30 p.m., M-F).
Lab (after 4:30 p.m., M-F, Saturdays, and Sundays).

Revised: 9/4/15

URINALYSIS

The Urinalysis Section is located on the 3rd Floor of the Medical Arts Building. The Supervisor is **Sharon Terry, MS, CLT**. The telephone extension is 7192. Urinalysis personnel provide twenty-four hour coverage.

The Urinalysis Laboratory performs routine and specialized urine tests as well as analysis of feces.

Revised: 9/4/15