

BRATTLEBORO MEMORIAL HOSPITAL

2025 LAB GUIDE GENERAL INFORMATION

ADMINISTRATION

Medical Director of Laboratory.....Jeffrey Stump, MD

Administrative Director of Laboratory Services..... Imogene Drakes, PhD, FACHE

Laboratory Supervisor.....Deborah Gay, MT, ASCP

TELEPHONE / FAX NUMBERS

General Information.....	257-8311
Results Inquiry:	
Clinical Fax.....	257-8287
Outpatient Phlebotomy.....	275.3633

LABORATORY HOURS

LABORATORY – CUSTOMER SERVICE MONDAY - FRIDAY 8AM – 4:30PM

PATHOLOGY AIDE MONDAY – FRIDAY 9 AM – 3:30PM*

* All other hours – Contact Pathologist on-call through BMH Operator (802) 257-0341

OUTPATIENT HOURS

MONDAY – FRIDAY 7AM – 6PM
SATURDAY 8AM – 12 PM
SUNDAY CLOSED
HOLIDAY HOURS AS POSTED

HOW TO COMPLETE OUTPATIENT LABORATORY REQUISITIONS

All outpatient Laboratory tests must be ordered on a Laboratory requisition (see Main Laboratory requisition on following page).

Mandatory Information Required:

1. Patient's full name, date of birth and gender
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-10 code (Choose from selection on back page of requisition or write ICD-10 code(s) on lines at the top of the back page).
8. Test(s) ordered
9. Specimen description

****IT IS ALSO VERY IMPORTANT TO INCLUDE THE DATE AND TIME OF SPECIMEN COLLECTION**
if you are collecting the specimen.**

Additional Information

1. If you need a test done STAT, place an X in the STAT box on the front of the requisition.
2. If you need results called or faxed to your office, please record this on the requisition and supply the phone/fax 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.

NOTES:

For certain infectious diseases (e.g., malaria), travel or other risk factors should be listed. Requisitions can be obtained from the laboratory by calling (802) 257-8311.

Front of Main Laboratory Requisition

Back Page of Main Laboratory Requisition

Battleboro Memorial Hospital Laboratory
 17 Belmont Avenue, Battleboro VT 05301
 (802) 275-3611 Fax: (802) 275-3633
 7 AM to 6PM Monday through Friday 8AM to 12 Noon Saturdays

BOLDFACE INDICATES MANDATORY INFORMATION!

Date of Service: ___/___/___
 Patient's Full "LEGAL" Name *print clearly*

Last name: _____ First name: _____ MI: _____
 Date of birth: ___/___/___ Male Female
 Street: _____ City: _____ State: _____ Zip: _____

Ordering Physician (Signature) _____
 Ordering Physician _____
 LEGIBLY Printed Name: _____
 Send a copy of this report to the following Drs (FULL Name): _____

REGISTRATION NUMBER: _____

Insurance Information
 Subscriber name: _____
 Relationship to subscriber: _____
 Guarantor name (if different from subscriber): _____
 Primary: _____ Insurance certificate # _____ Group # _____
 Secondary: _____ Insurance certificate # _____ Group # _____
 Place a P for primary or S for secondary in the appropriate box:
 BC/BS State Medicaid State Medicare MVP Other _____
 Other insurance name and address _____
 CIGNA Workers' Comp Other (Specify) _____

Office Collection Information
 STATUS Routine STAT
 Collect Date: _____ Time: _____ Collected by: _____

SELECT AND/OR ENTER DIAGNOSIS FOR EACH TEST. ON THE REVERSE SIDE OF FORM ELSE WE CANNOT PROCESS THIS ORDER

PANELS
 Basic Metab Panel
 Lipid/Cardiac Panel **F**
 CBC (with automated diff)
 Comp. Metab. Panel **F**
 Electrolytes
 Hepatic (Liver) Panel
 Hepatitis Profile, Acute
 New England Reg. Allergy Panel
 Pediatric/Food Allergy Panel

INDIVIDUAL TESTS
 Albumin
 Alkaline phosphatase
 Alpha-Fetoprotein (AFP)
 ALT (SGPT)
 AST (SGOT)
 Ammonia
 Amylase
 ANA (later performed if positive)
 Bilirubin - Total | Direct
 BNP (NT-Pro B-Type Natriuretic Peptide)
 BUN
 CA 125
 Calcium
 Carbamazepine (Tegretol)
 CEA
 Cholesterol - F
 CK
 CRP-Cardio
 CRP-Cx Range (Inflammatory)
 Creatinine
 Cortisol, Serum
 Digoxin
 Dilantin (Phenytoin)
 Drug screen: urine (13 drugs test)
 Estradiol
 Ferritin
 Folic Acid
 FSH
 Gamma GT
 GTT: F ___ Hour (Mon-Fri only)
 Glucose: ___ Random
 Glucose: 1Hr PP 50g Glucose
 Glucose: 2Hr PP 75g Glucose
 Glucose: 2Hr Postprandial (meal)
F: Fasting

Hemoglobin A1c
 HCG (quantitative)
 HCG Qualitative: Urine
 HCG Qualitative: Serum
 Hct **F**
 Helicobacter pylori IgG
 Hemoglobin
 Hematocrit
 Hepatitis A IgG
 Hepatitis A IgM
 Hepatitis B surf: antibody
 Hepatitis B surf: antigen
 Hepatitis B core antibody
 Hepatitis C antibody
 Hepatitis C RNA RT-PCR
 Hepatitis C genotyping
 HIV antibody Screen
 HIV Quant/Rfx to Genotype
 Homocysteine - F
 Immunodeficiency prf/CD4
 (Monday - Thursday only)
 Immunofixation evaluation
 Immunoglobulin G, IgM, IgA
 Iron: Total and TIBC
 LDH
 Lead _capillary_ venous
 Lipase
 Lipoprotein Metabol Prof - F
 Luteinizing Hormone (LH)
 Lithium
 Lyme Ab (Westrn Blot If Pos.)
 Magnesium
 Microalbumin sem-qnt scrn
 Mono Spot Test
 Phenobarbital
 Phosphorus
 Potassium
 Preealbumin
 Progesterone
 Prolactin
 Protein electrophoresis, Serum
 PSA - screening
 PSA - diagnostic
 PSA, Total and Free
 PT/INR

PTH, intact
 PTT
 Reticulocyte count
 Rheumatoid factor
 RPR (serology)
 Rubella IgG Antibody
 Rubella
 Sed. Rate (Westergren)
 *Semen Anlys (Mon-Fri only)
 *Post Vas ___ Fertility
 see spec. instr. for collect

Occult Blood (X P)
 Stool culture
 (Sul/SHg/Camp/E.col)
 Giardia antigen testing
 C.difficile antigen and toxin A
 Pinworm prep (stool not accept.)
 O&P: **Must include pt. travel history**
 Genital/vag/cx/for beta strep
 Genital routine culture
 (vag/cx/urethral)
 GenProbe: Chlamydia/GC
 site: ___ cervix ___ urethra ___ eye
 Genital wet prep: Trich/yeast/Cue
 Blood Culture: # of sets: _____
Must specify source/site for the following tests:

SITE:
 Routine culture - aerobic/wound
 Routine culture - anaerobic
 KOH prep fungus
 Fungal Culture
 Body fluid Culture (must send fluid in sterile cup)
 Gram stain only
 Urinal culture (non respiratory)
Virus suspected:
 Herpes simplex (HSV) by PCR
 RSV urinal screen (NP washing)

BLOOD BANK
 ABO/Rh Type only
 Antibody Screen, Indir. Coombs
 Direct Coombs
 Rhodam, includes Antibody Scrn
 CROSSMATCH:
 # UNITS For ___/___
OTHER TESTS (FULL TEST NAME) PRINT LEGIBLY PLEASE:
 Decline Reflex:

MICROBIOLOGY
 Throat beta Strep screen
 Throat rout. (incl beta strep)
 Sputum cult (incl Gram stain)
 Sputum AFB (TB) cult, smear
 Stool for WBC
 Urine culture
 ___ Cath ___ Ubag

Patient instructions: Fasting: if tests require fasting, do not eat or drink any liquids other than water for 12-14 hours. Tests requiring fasting have an "F" next to them. **Specimen collection:** call laboratory for specific instructions on collecting urine, sputum, stool, etc.

Most of the tests on this order form possess Medicare Local and/or National Coverage Determination policies (LCD/NCD). Refer to the policy for those diagnoses that are acceptable. Please document the diagnosis that supports the medical necessity for ordering the test.

Below is a list of high volume diagnosis codes for ordered tests. Check off applicable diagnoses if appropriate. If diagnosis is not listed below, enter the code and description to the right. NOTE: PER CMS RULES, WE CANNOT PROCESS TESTS WITHOUT ADEQUATELY INDICATED DIAGNOSIS INFORMATION.

ICD10 Diagnosis	Code(s)	Description	Please enter diagnosis for each test ordered
Abdominal pain			
R10.0	R44.0	Acute abdomen	
R10.10	R44.1	Upper abd. pain, Unspec.	
R10.11	R44.9	Right upper quadrant pain	
R10.12	R44.9	Left upper quadrant pain	
R10.13	R44.9	Epigastric pain	
R10.2	R44.10	Abdom heart disease of native coronary artery w/o ang pect	
R10.20	R44.11	Abdom heart disease of native cor art w unstable ang pect	
R10.30	R44.20	Lower abd. pain, Unspec.	
R10.31	R44.21	Right lower quadrant pain	
R10.32	R44.22	Left lower quadrant pain	
R10.33	R44.23	Periumbilical pain	
R10.4	R44.3	Generalized abdominal pain	
R10.9	R44.9	Unspec. abdominal pain	
Anemia			
D64.0	E11.2	Hereditary sideroblastic anemia	
D64.1	E11.21	Secondary sideroblastic anemia due to disease	
D64.9	E11.9	Anemia, Unspec.	
D59.0	R44.9	Iron deficiency anemia, Unspec.	
Arthritis			
M12.89	K58.9	Other specific arthropathies, NEC, multiple sites	
Atrial fibrillation			
I48.0	K59.1	Paroxysmal atrial fibrillation	
I48.1	K59.7	Persistent atrial fibrillation	
I48.2	K59.9	Chronic atrial fibrillation	
I48.9	K59.9	Unspec. atrial fibrillation	
Blood chem abnormal			
I78.71	Z79.89	Abnormal level found in blood	
I79.89	Z79.89	Other specified abnormal findings of blood chemistry	
I79.09	Z51.81	Other abnormal glucose	
Coagulant defect			
D68.9	Z51.81	Other spec. coagulation defects	
D68.9	Z51.81	Coagulation defect, Unspec.	
Z79.01	Z51.81	Long term use of anticoag.	
COPD			
J44.0	J44.0	Acute lower resp infect	
J44.1	J44.1	COPD w (acute) exacerbation	
J44.9	J44.9	COPD, Unspec.	
Coronary artery dis			
I25.10	I25.10	Abdom heart disease of native coronary artery w/o ang pect	
I25.11	I25.11	Abdom heart disease of native cor art w unstable ang pect	
Depressive disorder			
F32.8	F32.8	Other depressive episodes	
F32.9	F32.9	Major depressive disorder, single episode, Unspec.	
Diabetes			
E10.9	E10.9	Type 1 diabetes mellitus without complications	
E11.05	E11.05	Type 2 diab mellitus w/hyperglycemia	
E11.69	E11.69	Type 2 diab mellitus w/other specified complic.	
E11.72	E11.72	Type 2 diab mellitus w/kidney complic.	
E11.81	E11.81	Type 2 diab mellitus w/diabetic neuropathology	
E11.9	E11.9	Type 2 diab mellitus w/o complic.	
Diarrhea			
K58.9	K58.9	Irritable bowel syndrome with diarrhea	
K59.1	K59.1	Irritable bowel syndrome without diarrhea	
K59.7	K59.7	Functional diarrhea	
K59.9	K59.9	Diarrhea, Unspec.	
Fever			
R50.8	R50.8	Other specified fever	
R50.9	R50.9	Fever, Unspec.	
Glucose-abnormal			
R73.09	R73.09	Other abnormal glucose	
R73.9	R73.9	Hyperglycemia, Unspec.	
R73.9	R73.9	Other abnormal glucose	
R73.9	R73.9	Hyperglycemia, Unspec.	
Hypercholesterolemia			
E78.0	E78.0	Pure hypercholesterolemia	
E78.1	E78.1	Pure hypertriglyceridemia	
E78.2	E78.2	Mixed hyperlipidemia	
E78.3	E78.3	Hyperchylomicronemia	
E78.4	E78.4	Other hyperlipidemia	
E78.5	E78.5	Hyperlipidemia, Unspec.	
E78.6	E78.6	Lipoprotein deficiency	
Hypertension			
I10	I10	Essential (primary) hypertension	
I15.01	I15.01	Congenital hypothyroidism without other	
I15.02	I15.02	Hypothyroidism due to meds and job ragenous subst.	
I15.03	I15.03	Postinfectious hypothyroidism	
I15.04	I15.04	Atrophy of thyroid (acquired)	
I15.05	I15.05	Myxedema coma	
I15.08	I15.08	Other spec. hypothyroidism	
I15.9	I15.9	Hypothyroidism, Unspec.	
Malaise and fatigue			
R53.0	R53.0	Postviral fatigue syndrome	
R53.1	R53.1	Neoplastic (malignant) related fatigue	
R53.2	R53.2	Weakness	
R53.81	R53.81	Other malaise	
R53.83	R53.83	Other fatigue	
Obesity			
E66.1	E66.1	Overweight	
E66.8	E66.8	Other obesity	
E66.9	E66.9	Obesity, Unspec.	

Pharyngitis, acute
 J02.0 Streptococcal pharyngitis
 J02.9 Acute pharyngitis, Unspec.

Routine GYN Exam
 Z01.411 Encounter for gyn exam (general) (routine) w/ abnormal findings
 Z01.419 Encounter for gyn exam (general) (routine) w/o abn findings

Screening malignant neopl
 Z12.4 Encounter for screening for malignant neoplasm of cervix
 Z12.5 Encounter for screening for malignant neoplasm of prostate

Thrombosis
 I82.40 Acute embolism and thrombus unsp deep veins of l low extrem
 I82.42 Acute embolism and thrombus unsp deep veins of l low extrem
 I82.49 Unsp (acute) embolism and thrombus unsp deep veins of l low extrem

UTI (urinary tract infection)
 N59.00 Acute cystitis without hematuria
 N59.01 Acute cystitis with hematuria
 N59.10 Interstitial cystitis (chronic) without hematuria
 N59.11 Interstitial cystitis (chronic) w/ hematuria
 N59.20 Other chronic cystitis w/o hematuria
 N59.21 Other chronic cystitis w/hematuria
 N59.30 Trigonitis without hematuria
 N59.31 Trigonitis with hematuria
 N59.40 Irradiation cystitis without hematuria
 N59.41 Irradiation cystitis w/hematuria
 N59.80 Other cystitis without hematuria
 N59.81 Other cystitis with hematuria
 N59.9 Urinary tract inf, site not specified
 E55.9 Vitamin D deficiency, Unspec.

PANEL INFORMATION:
 Basic Metabolic Panel: GU, BUN, NA, K, CL, CO2, CREA, CA, Anion Gap, Creatinyl (Calculated), Glomerular Filtration Rate (GFR)
 Lipid/Cardiac Panel: CHL, TRIG, HDL, Calculated LDL
 Comprehensive Metabolic Panel: GU, BUN, AST, ALT, ALK, PHOS, TBILL, CA, TP, ALB, CREA, NA, K, CL, CO2, Anion Gap, Creatinyl (Calculated), Glomerular Filtration Rate (GFR)
 Electrolyte Panel: NA, K, CL, CO2, Anion Gap
 Hepatitis (Liver) Panel: TBL, DBIL, AST, ALT, ALK, PHOS, ALB, TP
 New England Regional Allergy Panel: Cat, Timothy Grass, Bermuda Grass, Ragweed, English Plantain, Cat Epithelium, Cladosporium, Alternaria Tenuis, House Dust Mites
 Pediatric Food Allergy Panel: Egg White, Milk, Wheat, Peanut, Soybean, Oat, Corn Food, Cashew, Cat Epithelium

CRITICAL LAB VALUES TO BE CALLED (3 Pages)

CHEMISTRY SECTION

Bilirubin, Total (All ages)		≥ 13 mg/dL
Blood Urea Nitrogen		> 104 mg/dL
CO ₂	<10 mmol/L	>40 mmol/L
Ca	<7.0 mg/dL	>14.0 mg/dL
Creatinine		> 7.4 mg/dL
Glucose (> 1 Month)	<50 mg/dL	>500 mg/dL
Glucose (Neonates)	<40 mg/dL	>200 mg/dL
Hepatitis B Surface Antigen Confirmatory Test		Positive
K	<3.0 mmol/L	>6.0 mmol/L
Mg	<1.0 mg/dL	>4.8 mg/dL
Na	<125 mmol/L	>160 mmol/L
Phosphorus	< 1.1 mg/dL	
Troponin I		≥ 0.1 ng/mL
Vitamin D		≥ 100 ng/ml

DRUG LEVELS GREATER THAN

Acetaminophen	>150 ug/mL	Phenytoin	> 30 ug/mL
Carbamazepine	> 15 ug/mL	Salicylate	>30 mg/dL
Digoxin	>2.5 ng/mL	Theophylline	>25 ug/mL
Gentamicin(peak)	>12 ug/mL	Tobramycin(peak)	>12 ug/mL
Gentamicin(random)	>13 ug/mL	Tobramycin(trough)	>2.0 ug/mL
Gentamicin(trough)	>2.0 ug/mL	Valproic Acid	>200 ug/mL
Lithium	>1.6 mmol/L	Vancomycin (peak)	>80 ug/mL
		Vancomycin (trough)	>25 ug/mL

HEMATOLOGY SECTION

TEST	“low” critical value	“high” critical value
WBC (Newborn)	< 4.0 K/ μ L	\geq 30.0 K/ μ L
WBC (Adult)	< 1.0 K/ μ L	\geq 20.0 K/ μ L
Platelets (Adult)	< 40 K/ μ L	None
Blasts, Differential	Present	Present
Hemoglobin, (Newborn)	< 9.7 ngm/L	> 22.3 ngm/L
Hematocrit, (Newborn)	< 29 %	> 67 %
Hemoglobin, (Adult)	< 8.0 ngm/L	> 20.0 ngm/L
Hematocrit, (Adult)	< 24%	> 60 %
Heparin, Low Mol. Wt.		> 2.0 IU/mL
Heparin, Unfractionated		> 1.0 IU/mL
APTT	None	>119.0 seconds
Protine, (PT)- (Adult)	None	>44.3 seconds
PT INR		>4.7
Neutrophil ABS % (auto Diff)	<0.49 K/ μ L	

MICROBIOLOGY SECTION

TEST	critical value
CSF Smear and/ or culture	positive
Acid Fast Smear and/or AFB Culture	positive
Blood Culture results	positive
MRSA on Nursing Home Patients	positive
VRE on Nursing Home Patients	positive
Group B Streptococci isolated from neonates or infants to age 3 months	All are called
B. Pertussis are called by VT State lab	positive
Campylobacter	positive

SEROLOGY SECTION

CRITICAL VALUE – TEST
Positive - Herpes Simplex virus culture from any urogenital site of a woman of childbearing age (10-50 years of age) called by UVMMC (Reference Lab).
Positive - Viral culture from any site of a neonate called by UVMMC or MML (Reference Labs)

URINALYSIS SECTION:

TEST	CRITICAL VALUE
Glucose (newborn)	Positive
Ketones (newborn)	Positive
Red blood cell casts	Positive
Reducing substance (<1 month)	Positive

BLOOD BANK/TRANSFUSION SERVICE:

TEST
Incompatible crossmatch in setting of urgent blood need.
Transfusion reaction investigations showing a hemolytic reaction.
Unavailability of products to fill and order.

SURGICAL PATHOLOGY SECTION:

Significant unsuspected diagnoses
Significant discrepancy between frozen and permanent diagnosis, with potential major impact on patient care

DEFINITIONS:

- 1) Licensed care giver: Refers to Physicians, Allied Health Staff, RN's, or LPN's.
- 2) Outpatient: This is any outpatient from a physician office, nursing home, or VNA at the time of the critical value report. Inpatient is any patient located on Med/Surg 2nd or 3rd floor, ACU, SCU, OR, Birth Center/ Nursery, Short Stay.

TRAINING:

All Technical and Phlebotomy staff are trained during orientation for new employees.

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.

REFERENCES:

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.
4. Roche Package inserts for the respective reagents.

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, Routine/Non-Complex (*20 minutes*)
- Troponin T (*30 minutes*)

CALLING CRITICAL RESULTS

PROCEDURE:

Once “critical” values for a test are established, laboratory personnel are required to follow this protocol for notification when critical results are obtained

Call immediately to notify a licensed caregiver on the floor, in a physician’s Office, Nursing Home, or VNA patient.

- a. Verify that patient is at this location (Nursing Home), or a patient at this office, or is being treated by VNA.
- b. All Out Patient Critical Values” will be called after the lab test is verified and indicated in LIS that a “Critical Result Value has occurred. Critical values will be reported to a licensed Caregiver (s) caring for the patient within 60 minutes after the test is verified in LIS. Lab staff will state to a caregiver that the results of a test are in a “Critical” value range and then give the critical value.
 - a) Lab will ask the care giver to repeat back to laboratory “the result or value reported.”
 - b) Lab staff will document the telephone call in the LIS in the “critical result area” place date, exact time, and the name of whom it was called to. This data will also appear in the various lab section reports.

Licensed caregiver in physician’s Office, Nursing Home, or VNA needs to immediately notify the “responsible licensed caregiver” who will act on the critical test result just being reported.

Critical test results may not be left on an answering machine. Please try several times to call.

BMH Pathologist will be notified if the “Outpatient” ordering physician/licensed caregiver could not be reached.

Other results may be deemed critical if, in the opinion of the Pathologist or Technologist, the results may indicate the patient may require urgent care.

Note: Laboratory technical staff are responsible for notifying ordering personnel concerning turnaround time delays due to processing issues such as a dilution due to a “high” out of range message from a lab analyzer, instrument malfunction, quality control problems, extended processing, workload backup, etc., and assuring them that they will receive test results ASAP.

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 BMH drawn samples and all Blood Bank specimens
 - all aliquots must bear the identity of the individual preparing the aliquot

Note: No aliquot is ever returned to the original container.

All Blood Bank samples for cross-match or type and screen must be labeled using the Secureline identification system.

2. OUTPATIENT (OP) LABORATORY REQUISITION – all OP specimens must be accompanied by a complete requisition. The form **must** contain the following:
 - Patient’s name
 - Patient’s sex
 - Patient’s date of birth
 - Name of physician or person legally authorized to order testing
 - Tests requested
 - Diagnosis (ICD 10) appropriate for all tests ordered.
 - 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.

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 (See Add-on or Storage Requirements for each test in the Test Menu) or 72 hours. 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:

- 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 as long as their discard dates.

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 and approval must be obtained from the Medical Director of the Laboratory prior to running the specimen. (See example of the *Authorization to Test Irretrievable Specimen* on the next page). 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 a comment such as Specimen labeling issue, assay performed at the request of the Healthcare Provider).

Documentation in the LIS must occur whenever the *Authorization to Test Irretrievable Specimen* (see next page) is used to accept an unlabeled or mislabeled specimen. The signed form will be retained in the laboratory and an Incident Report must be completed.

BRATTLEBORO MEMORIAL HOSPITAL LABORATORY
17 BELMONT AVENUE
BRATTLEBORO, VT 05301

AUTHORIZATION TO TEST IRRETRIEVABLE SPECIMEN

Name of Patient _____ Date of Birth _____

Medical Record Number _____ Accession Number _____

Date Specimen Collected _____.

Ordering Provider _____

Test Ordered _____

Type of Specimen _____

Source of Specimen _____

Signature of Provider authorizing testing of specimen _____ Date _____

Laboratory Medical Director's signature _____ Date _____

Laboratory Administrative Director's signature _____ Date _____

PATIENT IDENTIFICATION

The phlebotomist will use two patient identifiers before drawing blood:

In an Outpatient setting:

Ask the patient a direct question, "Can you give me your full name please?" 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.

REFERRAL OF SPECIMENS

Skin scrapings, conjunctival scrapings, throat swabs, Tzanck preparations, nasopharyngeal swabs, (e.g., for *B. pertussis*), and lavage for viruses are samples that are collected from procedures performed by the ordering clinic or providers on the floors.

A nucleic acid amplification test (NAAT) is available at the reference laboratories for the rapid detection of *Mycobacterium tuberculosis* for diagnosis of *Mycobacterium tuberculosis* complex infections on the initial respiratory specimen from patients suspected of having pulmonary tuberculosis.

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 0600 - 0800.
 2. Periodic routine rounds may be 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 6AM 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 all specimen types.
 7. Site / source of specimen as appropriate.

NOTE: All Inpatient specimens should be sent to the lab with the computer-generated label.

- 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.

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.”

SUPPLIES FOR PHYSICIAN OFFICES

The BMH Laboratory provides a variety of collection supplies to assist clinicians in obtaining samples for testing in the BMH Lab and in the Reference Labs used by BMH. An order form for supplies may be obtained by calling the laboratory at 257-8311.

Urgent Inpatient supply orders will be filled within 24 hours and non-urgent Inpatient and Outpatient supply orders will be filled within 72 hours.

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

BLOOD BANK SECTION (BB)

The Blood Bank is located in the Main Laboratory on the ground floor. The telephone is extension 8311. 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. Indications for transfusions/recommendations are embedded within printed transfusion orders and on electronic orders

BB - EMERGENCY (UNCROSSMATCHED) BLOOD PROTOCOL

For an order of UNCROSSMATCHED blood, call the Blood Bank (Ext. 8311) indicating the need for Uncrossmatched blood, stating the number of units needed. This will give the Blood Bank Tech an opportunity to begin processing the necessary paperwork and deliver the blood to the appropriate unit.

The UNCROSSMATCHED blood will be issued with a red “UNCROSSMATCHED BLOOD” sticker attached to the face of the unit. The “Emergency Transfusion Request” 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 request form and return the form to the Blood Bank Tech.

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

BB - FROZEN PLASMA

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

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

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

BB - PATIENT SAMPLE COLLECTION

Blood samples submitted to the Blood Bank for testing must be properly labeled or they will not be accepted. Type and Screen and Crossmatch samples must be labeled with a Securline Blood Band at the time of collection.

The preferred specimen type is the 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.

BB – PLATELETS

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

Platelets should be ordered by 10:00 am for transfusion the same day Monday through Friday. If platelets are ordered by 10:00 am, platelets will be ready for transfusion by 4:30 pm.

Call the Blood Bank (ext. 8311) to order platelets.

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.

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.

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.

BB - REQUESTS

Requests for Blood Bank testing are made in the Hospital Information System through Order Entry, or by completing the Laboratory Requisition Form. The patient should have a Complete Blood Count done by this laboratory within 24 hours before transfusion.

Pre-Admission Surgical Patients

The Type and Screen or Crossmatch procedures are always performed on the day of surgery. 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.

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

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 with Pathologist approval 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.

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) Hives are considered a transfusion reaction and the transfusion should be stopped if the patient develops hives.

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 30 minutes to crossmatch up to four units of blood.

CLINICAL CHEMISTRY

Routine and STAT Clinical Chemistry tests are performed in the main laboratory. The telephone extension is 8311. Technical personnel provide twenty-four hour coverage. This section of the Laboratory operates 24-hours a day, 7 days a week. The types of tests performed are shown below:

TESTING SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
Chem Tests	Chem Tests	Chem Tests	Chem Tests	Chem Tests	Chem Tests
Immunology	Immunology	Immunology	Immunology	Immunology	Immunology
Therapeutic Drug	Therapeutic Drug	Therapeutic Drug	Therapeutic Drug	Therapeutic Drug	Therapeutic Drug
Drugs of Abuse	Drugs of Abuse	Drugs of Abuse	Drugs of Abuse	Drugs of Abuse	Drugs of Abuse

Cobas 6000: Chemistry Profiles: Basic Metabolic, Comprehensive Metabolic, Electrolytes, Hepatic and Lipid.
 Acetaminophen, Alanine Amino Transferase (ALT), Albumin, Alkaline Phosphatase, Ammonia, Amylase, Aspartate Amino Transferase (AST), Calculated LDL, Carbamazepine (Tegretol), Carbon Dioxide, Chloride, Cholesterol, Cortisol, Creatine Kinase, Creatinine, C-Reactive Protein (CRP), C-Reactive Protein - high sensitivity, Digoxin, Direct Bilirubin, Estradiol, Ethanol, Fentanyl, Ferritin, Free T3, Free T4, Folate, Follicle Stimulating Hormone (FSH), Gamma Glutamate Transferrin (GGT), Gentamicin, Glucose, HDL-Cholesterol, Hepatitis A IgM, Hepatitis B Core IgM, Hepatitis B Surface Antibody, Hepatitis B Surface Antigen (HBsAg), Hepatitis B Surface Antigen Confirmatory Test, Hepatitis C Antibody (HCV), Hemoglobin A1c, Hormone Chorionic Gonadotropin, quantitative (β -hCG), Iron, Lactate Dehydrogenase (LDH), Lactic acid, Lipase, Lithium, Luteinizing Hormone (LH), Magnesium, Microalbumin, Parathyroid Hormone Intact (PTH Intact), Phenytoin (Dilantin), Phosphorus, Potassium, Pro BNP, Prostate Specific Antigen (PSA), Protein, Rheumatoid Factor, Rubella, Salicylate, Sodium, Theophylline, Thyroid Stimulating Hormone (TSH), Tobramycin, Total T3, Total T4, Total Bilirubin, Total Iron Binding Capacity (TIBC), Triglycerides, Troponin-T, Urea Nitrogen, Uric Acid, Valproic Acid, Vancomycin, Vitamin B12, Vitamin D.
 CSF: Protein and Glucose.

MEDTOX: Amphetamines, Barbiturates, Buprenorphine, Benzodiazepine, Cocaine, Methadone, Methamphetamine, Opiates, Oxycodone, Phencyclidine, Propoxyphene, Tetrahydrocannabinol, Tricyclics.

Manual Testing: STAT HIV (for needlesticks and prenatal Mothers with unknown HIV status), Beta hydroxybutyrate, Fluid pH except Pleural Fluid which is performed by the Respiratory Therapy Department.

HEMATOLOGY

The Routine Hematology Laboratory performs all blood counts and coagulation testing. 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 24 hours a day.

Bone marrow biopsies are provided in conjunction with the Histology Section. Consultation on peripheral and marrow smears is available with the Pathologist.

Special stains may be considered following consultation with the Anatomic Pathology Department (Ext. 8311).

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.

MICROBIOLOGY SECTION

Regular Microbiology personnel are on duty from 0700 to 1530 on weekdays and 0700 1500 on 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, Legionella and RSV and specimen planting. Gram stains from positive blood cultures are read and reported on a 24/7 basis.

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, white blood cells or culture must be placed in fixation within half an hour of collection. Refer to specific test pages in the Test Menu for individual guidelines.

Anaerobic Cultures

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.

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. 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.

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.

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.

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 for aerobic pathogenic organisms (and tests for Neisseria gonorrhoea, Chlamydia trachomatis and Trichomonas vaginalis are routinely performed by the PCR method. However, if Haemophilus ducreyi, or Gardnerella vaginalis is suspected, a special request should be made. A graded gram stain or wet prep 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.

MICRO - MYCOBACTERIOLOGY (ACID FAST, TB)

Mycobacteriology deals with detection, isolation and identification of acid fast bacilli (AFB) 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 and other acid fast isolates are sent to the Vermont Department of Health for culture and susceptibility testing. Urine for AFB does not include a smear. Stool for AFB is not accepted on Fridays. Blood cultures for AFB are collected in yellow isolator tubes and sent to the University of Vermont Medical Center.

In Addition, Mayo Clinical Laboratories offers nucleic acid testing for *M. tuberculosis* as appropriate.

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. KOH on category 1 specimens are reported with 30 hours. Culture updates are sent weekly. Yeast isolates are identified in the Microbiology Laboratory as either presumptive Candida albicans or Yeast not Candida albicans. Further identification or susceptibilities testing can be requested. The testing will be sent to a reference laboratory. Mold isolates are sent to a reference laboratory for identification.

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 and must be plated at the time of collection.

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.

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 \geq 25 squamous epithelial cells per low per field 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.

MICRO - SUBMISSION OF SPECIMENS

TECHNIQUE AND AVAILABILITY:

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 Main Laboratory or Routine specimens may be dropped off at Richards Building during the hours of 7 to 6 pm on Weekdays and at 8 to 12 pm on Saturdays. Laboratory personnel will accession tests as ordered and give to the Microbiology section

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.

MICRO - URINE CULTURES

Specimens for routine urine culture (voided and catheterized) can be submitted to the Main Laboratory at any time. 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.

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 and Influenza A & B are available in the Microbiology Laboratory.

Specimens for viral isolation are referred to a reference laboratory.

SEROLOGY

Manual Testing: STAT HIV (for needlesticks and prenatal Mothers with unknown HIV status), Rheumatoid Arthritis Screen, Mononucleosis Screening, Serum and Urine hCG testing at all times.

URINALYSIS

The Urinalysis Section Laboratory performs routine urinalysis.

Manual Testing: Specialized urine tests, including qualitative hCG, as well as occult blood analysis of feces and gastric contents.

SPECIMENS REFERRED TO REFERENCE LABORATORIES

Cytopathology

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

SUPPLIES:

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

- Instructions to the Patient_for urine / sputum collection
- Sterile containers for urine and sputum.
- Requisitions
- Biohazard specimen bags
- Thin Prep collection vials with spatula and Endocervical brush
- Endocervical brooms

PATHOLOGY SPECIMENS

Except for frozen sections, all pathology specimens are processed by the University of Vermont Health Network.

All specimens must be submitted to the BMH Main Laboratory accompanied by the appropriate 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 BMH Specimen Collection Guide or Test Menu for appropriate fixatives and transport media.

Requisitions that may be used for the various types of pathology and cytopathology specimens are shown in the pictures on the following pages.

PATHOLOGY-AUTOPSY

Brattleboro Memorial Hospital offers non-medical-legal service for performing autopsies based on certain criteria. The criteria include:

- The cause of death is uncertain;
- The cause of death is unexpected or a major diagnosis is in doubt;
- Medical complications of uncertain etiology exist;
- A potentially hereditary disease exists with potential inherited sequel;
- The patient belongs to a medical or study protocol;
- The death occurs in the peri-operative or post-operative time period;
- A public health issue exists;
- Death occurs in an obstetrical, neonatal, pediatric or adult patient under the age of 40.

Current information on the performance of autopsies is available in the BMH Autopsy policy on SharePoint (*last reviewed January, 2020*).

In certain cases, deaths may be reportable to the Medical Examiner of Vermont State. Current information on cases for the Vermont Medical Examiner is recorded in the BMH policy on SharePoint entitled Medical Examiner Cases for BMH (*last reviewed/ revised February 2020*).

REQUISITION FOR HEMEPATHOLOGY/FLOW CYTOMETRY AND GENETIC TESTING

University of Vermont MEDICAL CENTER Hemepath / Flow Cytometry / Genetic Laboratory Form 111 Colchester Avenue • Burlington, VT 05401 • (802) 847-6121 www.uvmhealth.org/ecosystems/bhs		PATIENT DEMOGRAPHIC INFORMATION NAME (LAST, FIRST, MI) PHO - MWN DOB SEX CM OF SOCIAL SECURITY NO.	
Provider: _____ First and last name required			
ACCOUNT INFORMATION / REPORT CODE Additional copy of report to (first and last name required): _____ CLIENT ID: _____			
BILLING INFORMATION <input type="checkbox"/> BILL INSURANCE (FILL IN LINES 1-5 OR SEND FACE SHEET) <input type="checkbox"/> BILL CLIENT ACCOUNT (FILL IN LINES 1-5 OR SEND FACE SHEET) <input type="checkbox"/> NO INSURANCE BILL PATIENT (FILL IN LINES 1-2)		RESPONDIBLE PARTY NAME: _____ PHONE NO.: _____ ADDRESS (STREET, TOWN, STATE, ZIP CODE): _____ MEDICARE NO. MEDICAID NO. MANAGED CARE MEDICAID NO. STATE INSURANCE COMPANY NAME CERT. NO. GROUP NO. SUBSCRIBER NAME SUBSCRIBER'S DOB RELATIONSHIP EMPLOYER	
*FOR MEDICARE PATIENTS: Medicare will only pay for services that it determines to be "reasonable and necessary" under section 1832 (b)(1) of the Medicare law. If Medicare determines that a particular service, although it would be otherwise covered is not "reasonable and necessary" under Medicare payment standards, Medicare will deny payment for that service.			
Preauthorization: For Molecular and Chromosome testing please obtain preauthorization from the patient's insurance prior to sample collection.			
DIAGNOSIS INFO Signs, symptoms, pertinent clinical history and lab data required. ICD-10 codes must reflect the same information that appears in the patient's medical record. No rule out R/O.		<input checked="" type="checkbox"/> CYTOGENETICS Chromosome Analysis Bone Marrow collect: BM Media or NaHep Blood collect: NaHep Lymph Node collect in Hanks Solution POC/Tissue/Tumor collect: Hanks Solution	
SAMPLE INFO Please Contact Customer Service prior to sending sample 800-991-2799 or 847-5121. Collect Date: ____/____/____ Collect Time: ____:____:____		<input checked="" type="checkbox"/> BONE MARROW MORPHOLOGIC EVALUATION (Check all that apply) Core biopsy (10% Zinc Formalin) Clot/Particle sections (10% Zinc Formalin) Peripheral Blood _____ Smears _____ EDTA _____ *Current CBC and Differential results are required for complete evaluation	
SAMPLE TYPE (Check ✓) <input type="checkbox"/> Blood <input type="checkbox"/> Bone Marrow (BM) <input type="checkbox"/> Lymph Node <input type="checkbox"/> Tissue / Tumor <input type="checkbox"/> PCC Other: _____		<input checked="" type="checkbox"/> BONE MARROW WITH REFLEX TESTING (Check all that apply) For a new diagnosis For a follow-up of a known diagnosis (indicate dx here) _____ For possible new onset acute leukemia or pancytopenia (Collect extra EDTA Tube) For Evaluation of myeloma or MGUS (Collect extra Sodium Heparin Tube) This patient requires additional non-reflex testing (indicate testing here) _____	
MEDIA (Check ✓) <input type="checkbox"/> Na Heparin <input type="checkbox"/> BM Media <input type="checkbox"/> EDTA <input type="checkbox"/> Formalin Time in Formalin: _____ <input type="checkbox"/> RPMI <input type="checkbox"/> Hanks Solution <input type="checkbox"/> Other: _____		<input checked="" type="checkbox"/> BONE MARROW REFLEX OPTION: If you wish to decline reflex indicate here (Check all that apply) <input type="checkbox"/> I decline Cyto Genetics <input type="checkbox"/> I decline Flow Cytometry <input type="checkbox"/> I decline FISH <input type="checkbox"/> I decline Mutational Analysis <input type="checkbox"/> I decline Multigene Panel (genomic testing)	
LAB USE: Other Testing: _____		<input checked="" type="checkbox"/> FISH CONGENITAL Blood collect NaHep DiGeorge Syndrome 22q11.2 Williams Syndrome 7q11.23 <input checked="" type="checkbox"/> FISH NEOPLASTIC (BM Media or NaHep) t(8;14) MYC/IGH and MYC Burkitt's Lymphoma t(8;21) RUNX1/RUNX1T1 Acute Myeloid Leukemia (AML) t(9;22) BCR/ABL Chronic Myelogenous Leukemia (CML) t(11;14) CCND1/IGH Mantle Cell Lymphoma 11c23 MLL Rearrangement AML, ALL, MDS t(12;21) ETV6/RUNX1 Acute Lymphoblastic Leukemia (ALL) t(14;18) BCL2/IGH Follicular Lymphoma t(15;17) PML/RARA Acute Promyelocytic Leukemia (APL) t(16;16) CBFB Rearrangement AML with Eosinophilia CLL FISH Panel	
INITIAL TEST Bone marrow aspiration and/or biopsy		REFLEX CRITERIA Suspicion of a hematolymphoid malignancy	
REFLEX TEST(S) Cyto Genetics, flow cytometry, FISH, PCR, mutational analysis, and/or genomic testing		ADDITIONAL CPT BILLED Examples include 00203, 80204, 80291, 80104-80109, and additional codes as may be applicable	
Genetics Testing: Submission of an order for any Laboratory test constitutes the certification to UVMHC that (1) the Ordering Provider has obtained the "Informed Consent" of the patient as required by any applicable state or federal laws with respect to each test ordered; and (2) the Ordering Provider has obtained from the patient authorization permitting UVMHC to report results of each test ordered directly to the ordering physician.			
SIGNATURE Please provide signature with lab orders		DATE _____ TIME _____	

LAB Form # 23-040125 (Rev. 2/13/2018)

GYN CYTOLOGY AND GENERAL REQUISITION



OUTPATIENT LABORATORY ORDER FORM
 111 Colchester Avenue • Burlington, VT 05401
 (802) 847-5121 • 1-800-891-2799 • Fax: (802) 847-5905
 UVM Labs TestCatalog.org

PATIENT DEMOGRAPHIC INFORMATION

PATIENT INFORMATION

NAME (LAST, FIRST, MI) _____
 UVMCC - MRN _____ DOB _____ SEX M F
 SOCIAL SECURITY NO. _____

Provider: _____
 (first & last name)

Ordering provider please provide signature below*

ACCOUNT INFORMATION / SUBMITTER CODE: **HBMH- Brattleboro Memorial Hospital (802) 257-9311** ADDITIONAL COPY OF REPORT TO (First and Last Name Required) _____ CLIENT I.D. _____

BILLING INFORMATION

BILL INSURANCE (Fill in Lines 1-3 OR SEND FACE SHEET)
 BILL CLIENT ACCOUNT (Fill in Lines 1-3 OR SEND FACE SHEET)
 NO INSURANCE BILL PATIENT (Fill in Lines 1-3)

RESPONSOR / PARTY NAME: _____ PHONE NO. _____
 ADDRESS (STREET, TOWN, STATE, ZIP CODE) _____
 MEDICARE NO. _____ MEDICAID NO. _____ MANAGED CARE/MEDICAID NO. _____ STATE _____
 INSURANCE COMPANY NAME _____ CERT. NO. _____ GROUP NO. _____
 SUBSCRIBER NAME _____ SUBSCRIBER'S DOB _____ RELATIONSHIP TO PATIENT _____ EMPLOYER _____

X Client Bill

DIAGNOSIS INFORMATION

Clinical diagnosis (ICD-10), signs, symptoms, patient history, etc. Medicare has rules regarding medical necessity, see "Outpatient Information" on back.

SPECIMEN INFORMATION

Collect Date: / / Collect Time: _____ Fasting: Yes No Urine: Yes No Other: _____ Phone to # _____
 FAX 002-257-0287 (24 Hour Urine volume: _____)

PANELS Panel info on back		MICROBIOLOGY	
BMP	Basic Metabolic Panel T	UWBCN	UW 1&2 Ab+Ag 5th Gen T
CMP	Comprehensive Metabolic Panel T	IGFS	IgA T
LYT	Electrolyte Panel T	IGGS	IgG T
LPR	Lipid Panel T	IGNS	IgM T
LWR	Hepatic Panel T	IRGN	IgA/IgM T
PNAT	Trenatal Panel B1, I, R, EDC, Transf. IIC T	IBC	Iron Binding Capacity T
THCAB	Thyroid Cascade T	LDR	Lactate Dehydrogenase T
CHEMISTRY		LEAD	Lead L
ALB	Albumin T	LH	Luteinizing Hormone T
ALP	Alkaline Phosphatase T	LIP	Lipase T
ALT	ALT T	LYMAB	Lyme Antibody T
AMY	Amylase T	MEGAL	Megacalcin IgG Ab T
ANAIFA	(ANA) Anti Nuclear Ab, FA T	MG	Magnesium T
ANCAIF	(ANCA) Anti Neutrophil Ab, FA T	MPCS	Monoclonal Protein Dx Panel T
AST	AST T	MONO	Monospot T
DBIL	Bilirubin Direct/Indirect T	MUWPG	Mumps IgG Ab T
CDP	Cellulose Electrophoresis T	NTBHP	NT Pro BNP T
CRPP	C-Reactive Protein T	PTHIN	Parathyroid Hormone, Intact X
CA125	Cancer Antigen 125 T	PHOS	Phosphorus T
CA	Calcium, Total T	K	Potassium T
CEA	CEA T	PROL	Prolactin T
CHOL	Cholesterol, Total T	PSA	Prostate Specific Antigen T
CK	CK T	PSAS	PSA Screen T
DNA	Anti dsDNA T	RFS	Rheumatoid Factor T
BUN	Blood Urea Nitrogen T	RUBG2	Rubella IgG Ab T
CREAT	Creatinine T	NA	Sodium T
SENPEP	Electrophoresis, Serum T	SYPH	Syphilis Serology T
FER	Ferritin T	FREET3	T3, Free T
SERFLC	Free Light Chain, Serum T	FREET4	T4, Free T
FSH	FSH T	TEST02	Testosterone T
GGT	GGT T	FTEST	Testosterone, Total and Free T
SGL	Glucose T	THYNAB	Thyroid Ab Profile T
GTI	Glucose, 1 hr Oral Glucose Tolerance X	THG	Thyroid Stim Hormone T
HCGS	HCG Pregnancy T	TRFS	Transferrin T
HCGUM	HCG Ure Pregnancy T	TRIG	Triglycerides T
HDL	HDL Cholesterol T	TT3	T3, Total T
HABAB	Hepatitis A Total, Ab T	URIC	Uric Acid T
HABE2	Hepatitis A Total, Ab w/ Reflex T	VALP	Valproic Acid T
HAB92	Hepatitis B Ab (Surface) T	VARI	Varicella IgG Ab T
HBSAG	Hepatitis B Surface (Surface) T	B12	Vitamin B12 T
HBCOR	Hepatitis B Core Ab T	VITD	Vitamin D, 25-OH, Total T
HSCSR2	Hep C Ab w/ Reflex PCR T		
HATC	Hemoglobin A1C T		

ThinPrep ORDER DATE/TIME: / / TIME: _____

Pap Screening (Low Risk) _____
 Pap Screening (High Risk) _____
 Pap Diagnostic _____

Source: (Check one) Vaginal Cervical/Endocervical Anal

Medication Name: _____ LMP: / /

Pregnant? Yes No Contraceptive Use? Yes No
 Post-Partum? Yes No Hormone Use? Yes No

GYN Clinical and Treatment History: _____

MICROBIOLOGY On ThinPrep Vial

Catalydia/GC ThinPrep Yes No
 HPV Fingerless of Diagnosis (Collect) (Ages 30+ ONLY) Yes No
 If Yes, Genotyping per ASCCP Screening Guidelines (Ages 30+ ONLY) Yes No
 HPV II ASCUS (Ages 25-29 ONLY) For Screening Paps ONLY Yes No
 HPV Regardless for Other Diagnostic Testing (Ages 20-21 ONLY) Yes No

If Yes, please specify reason: _____

Write-In Tests: Please print & Avoid Abbreviations

Most have at least 2 patient identifiers on each patient sample

Test Information Website: UVM.Labs.TestCatalog.org

For specimen and container info see back of form

IF YOU WISH TO DECLINE REFLEX INDICATE TESTS HERE

DATE: _____ TIME: _____

LIP Form # 23-314951 (7/21/21)

UVMCC LABORATORY COPY

BMH LAB GUIDE
GENERAL INFORMATION

SURGICAL PATHOLOGY NON-GYN CTYOLOGY REQUISITION

University of Vermont MEDICAL CENTER
SURGICAL PATHOLOGY/NON-GYN CYTOLOGY REQUISITION
 111 Colchester Avenue • Burlington, VT 05401 • (802) 847-5121
 www.uvmhealth.org/medcenterlabs

PATIENT DEMOGRAPHIC INFORMATION

PATIENT DEMOGRAPHIC INFORMATION

NAME (LAST, FIRST MI) _____

UVMHC - MRN _____ DOB _____

SEX _____ SOCIAL SECURITY NO. _____

M F

Ordering Provider: _____
 (First and Last Name)

REPORT CODE/ACCOUNT NAME: **Brattleboro Mem. Hosp. 002-267-0311**

ADDITIONAL COPY TO (First and Last Name Required): _____ CLIENT I.D. _____

BILLING INFORMATION

RESPONSIBLE PARTY NAME: _____ PHONE NO. _____
*Residents must document an attending physician

ADDRESS (STREET, TOWN, STATE, ZIP CODE): _____

MEDICARE NO. _____ MEDICAID NO. _____ MANAGED CARE/MEDICAID NO. _____ STATE _____
*Medicaid or MT rules require physician signature on all laboratory orders. See our website.

INSURANCE COMPANY NAME: **INSURENMI** CERT. NO. _____ GROUP NO. _____

SUBSCRIBER NAME _____ SUBSCRIBER'S DOB _____ RELATIONSHIP _____ EMPLOYER _____

BILL INSURANCE (Fill in Lines 1-5 OR SEND FACE SHEET)

BILL CLIENT ACCOUNT (Fill in Lines 1-5 OR SEND FACE SHEET)

NO INSURANCE BILL PATIENT (Fill in Lines 1-2)

SAMPLE AND DIAGNOSIS INFORMATION AREA - COMPLETE THIS SECTION FOR ALL SPECIMENS.

COLLECTION DATE	COLLECTION TIME	FAX TO #	CALL TO #

CLINICAL DIAGNOSIS (ICD-10) SIGNS, SYMPTOMS, PERTINENT HISTORY AND LAB DATA IS REQUIRED, NO R/D

DIAGNOSIS INFORMATION

LMP: _____
(First Day - Last Menstrual Period)

SURGICAL PATHOLOGY (Tissue Samples)

Tissue Submitted/Method Obtained _____

Time in Formalin: _____

NON-GYN CYTOLOGY TESTING (Cells/Fluid)

Fine Needle Aspirate (FNA)	Urine
FNA Palpation	Urine, voided, cytology
FNA Radiology Guided	Urine, catheterized, cytology
Respiratory	Urine, barbottle, cytology
Sputum cytology	Renal pelvis washing cytology
Bronchial washing cytology	Renal pelvis brushing cytology
Bronchial brushing cytology	Ureteral washing cytology
Transbronchial FNA	Ureteral brushing cytology
Bronchoalveolar lavage cytology <small>Speciate request on BAL</small>	Microbiologies
	CSF Cytology
Gastrointestinal	Skin Scraping cytology (Tazick prep)
Esophageal washing cytology	Specify site
Esophageal brushing cytology	
Gastric washing cytology	
Gastric brushing cytology	
Colonic brushing cytology	
Fluids	
Pleural fluid cytology	OTHER
Peritoneal fluid / ascites cytology	
Peritoneal washing cytology	
Diaphragmatic washing cytology	
Diaphragmatic brushing cytology	

ORDERING PHYSICIAN SIGNATURE _____ DATE _____ TIME _____

ANATOMIC PATHOLOGY COPY

PTH Form # 23-017154 (1/6/2022)