LOS ALAMOS MEDICAL CENTER

2010

Clinical Laboratory Services Manual

3917 West Road
Los Alamos, NM 87544
(505) 661-9542
Fax (505) 662-5437

Los Alamos Medical Center
Laboratory Services Manual

Table of Contents

Introduction

This Laboratory Services Manual features the procedures and services available from the clinical laboratory at the Los Alamos Medical Center. It is designed to serve as a reference for the collection and submission of specimens for analysis.

The clinical laboratory offers a wide range of valuable diagnostic services. With highly trained personnel and state of the art technology, we are able to provide around the clock clinical laboratory analysis in Chemistry, Hematology, Immunohematology, Urinalysis, Microbiology, and Serology. For those procedures that are not performed in this facility, we have acquired the services of larger and often very specialized reference laboratories that share the same beliefs as we do in providing you with high quality lab results.

HOSPITAL MISSION:

We believe the heart of healthcare is service to others. Our single goal is to provide affordable, accessible, first-rate healthcare that improves the health and well being of the people we serve and raises the quality of life for all concerned. Working in partnership with communities, we constantly seek to build healthcare systems that are locally focused and nationally recognized as the standard by which community hospitals are judged.

LABORATOTY MISSION:

We will provide high quality, cost-effective laboratory analysis to health care providers in Los Alamos County and Northern New Mexico.

General Information:

Address: Los Alamos Medical Center Laboratory
3917 West Rd.
Los Alamos, New Mexico 87544

Phone Numbers:

Main Laboratory Direct Line	(505) 661-9542
Laboratory Director	(505) 661-9126
Laboratory Fax	(505) 662-5437
Gateway Collection site	(505) 662-0442
Gateway Collection Fax	(505) 662-0464
Espanola Clinic	(505) 662-2177

The following extensions are valid only within the hospital.

Blood Bank	ext. 1543
Chemistry	ext. 1547
Hematology	ext. 1549
Microbiology	ext. 1546
Pathology/Cytology results	ext. 1518
Laboratory Results	ext. 1542
Blood Collection Requests	ext. 1542 or 1540
Laboratory Director	ext. 1126

Accreditations:

College of American Pathologists (CAP) # 22396-01

Clinical Laboratory Improvement Amendments (CLIA) of 1998 #32D0536733

Joint Commission on Accreditation of Health Care Organizations (JCAHO) 2009

Proficiency Testing Program:

College of American Pathologists (CAP)
American Proficiency Institute (API)

Los Alamos Medical Center
Clinical Laboratory

Ruth McDaniel (Interim)
Los Alamos Medical Center CEO

H. Clark Anderson, M.D.
Laboratory Medical Director

Beverley Simpson, MT(ASCP)
Laboratory Director

Joselene Montoya, MT(ASCP)
Resource Technologist

Norma Buttler, MT(ASCP)
Chemistry
Lead Technologist

Juanito Naval Jr. MT
Hematology / Urinalysis
Lead Technologist

Leo St. Jean MT(ASCP)
Safety Officer

Elaine Joseph, MT(ASCP)

Ana Maria Ojeda, MT

Sandra Lopez
Lab Assistant

Monica Pacheco
Lab Assistant

Dawna Romero
Lab Assistant

Corine Torrez
Lab Assistant

Wendi Akerley, MT(ASCP)
Blood Bank / Coagulation
Lead Technologist

Jana Nichols, MT(ASCP)
Microbiology
Lead Technologist

Laurie Veal, MLT
Weekend Lead Technologist

Mindy Kohn, MLT

Lauren Williamson, MT(ASCP)

Sarah Martinez
Lab Assistant

Reina Coriz
Lab Assistant

Colleen Sandy
Lab Receptionist

Scope of Service

Laboratory

Types and ages of patients served:	Neonate, Infant, Pediatric, Adolescent, Adult, and Geriatric Patients
Hours of Service	Outpatient Services: Monday – Friday 6:30am to 5:00pm Saturday 8am to Noon Gateway Medical Draw Station Monday – Friday 6:30am to Noon Espanola Clinic Draw Station Monday – Friday 6:30am to Noon Inpatient Services & Emergency Care 24 hours per day, 7 days per week
Specific services provided to, for, and with patients and their significant others:	Clinical Laboratory Services: Hematology, Chemistry, Special Chemistry, Immunohematology, Serology, Urinalysis, Microbiology, and Phlebotomy services.
Ability to meet patients' needs: (Tell what services are provided through the department and what services must be provided through referral, consultation, contractual arrangements, etc.)	Any laboratory service not provided by LAMC Clinical Laboratory will be provided via contractual arrangements with various reference laboratories including the following services: Histology, Cytology, and esoteric / miscellaneous laboratory procedures.
Levels of staff by position and hour available (core staffing):	LAMC Clinical Laboratory utilizes Regular, Part time, and PRN staffing to ensure adequate staffing measures are met in the following areas: Outpatient FTE's: 1.0 Receptionists 1.0 Customer Service Representative 6.0 Laboratory Assistants 5.5 Medical Technologist / Medical Technician Weekend and off shift FTE'e: 1.5 Evening Medical Technologist 1.0 Night Shift Medical Technologist 1.0 Weekend Day Shift Technologist 1.0 Weekend Night Shift Technologist 0.1 Saturday Laboratory Assistant
How is staffing augmented or increased when needed?	Staffing remains the same and occasionally overtime may be used.
Recognized practice standards or guidelines?	LAMC is accredited by the following agencies for practice standards: College of American Pathologists (CAP) Lifepoint Corporate Policy

LOCAL POLICIES:

Animal Specimens:

LAMC Laboratory does not accept animal specimens for testing except by special arrangement.

Cancellation of Tests:

Cancellations received prior to test set-up(preparation) will be honored at no charge. Requests received following test set-up will not be honored. A report will be issued automatically and charged appropriately.

Medical-Legal Specimen Collection:

LAMC Laboratory is capable of providing medico-legal specimen collections. An employer account must exist and a chain of custody form must be obtained in advance. No forensic testing is performed at this facility. All forensic specimens are sent to qualified reference laboratories. LAMC is not certified to perform DOT collections.

Radioactive Specimens:

Patients who are receiving any type of radioactive treatment of diagnostic test must notify the laboratory before testing is administered. Failure to notify will invalidate certain testing methodology results. Specimens are not routinely tested at LAMC for background radioactivity.

Supplies:

LAMC Laboratory provides, at no charge, materials and instructions for proper collection, submission, and transportation of specimens to the laboratory. Supplies are available for collection and submission of specimens that are referred to LAMC Laboratory only. Supply usage is monitored. LAMC Laboratory customers are encouraged to inventory their supplies on a regular basis to avoid depletion of stock and allow LAMC Laboratory to accurately plan inventory ordering patterns.

Please refer to and use the inventory request form located in the back of this manual.

Billing Information

Tests are billed separately or by panel. A combination of individual tests and panel billing is possible if tests ordered are not included in a panel. Fees for testing are available upon request.

Medicare will not pay for tests that are not considered medically necessary. Laboratory personnel will determine if medical necessity criteria is met before collecting a sample from the patient (non-emergency cases only). If the diagnosis does not support the test(s) ordered, laboratory personnel will prepare and Advanced Beneficiary Notice (ABN). In non-emergency situations, the ABN must be signed by the patient before the sample is collected.

If you have any questions regarding your bill, please contact the Los Alamos Medical Center Business Office at (505)-662-4201 option 5.

Laboratory

Requisitioning and Reporting

Laboratory Requisitioning and Reporting

Each specimen must be accompanied by a completed requisition or doctor's order signed by the ordering physician. To prevent testing delays, all tests and panels ordered should be clear. Laboratory personnel will clarify unclear orders before collecting or process samples.

All Laboratory requisitions must have the following complete information:

- Patient's Full Name
- Patient's Date of Birth
- Signature of Health Care Provider
- Initials of person preparing the requisition
- Diagnosis or ICD-9 code
- List of tests requested

Additionally, patient's gender and source of specimen (when applicable) are helpful in proper analysis and interpretation.

There are four different levels in which to prioritize result reporting. Each report will contain the specific result and normal range, if established. These four levels are as follows:

- **ROUTINE**
  Regular specimen processing and analysis performed on a daily or batched basis. Results available next business day or sooner.
- **ASAP (AS SOON AS POSSIBLE)**
  ASAP gives a higher priority than routine. Results available within 2 hours of receipt.
- **STAT**
  Highest priority. To be used only for life threatening situations. Results available within 1 hour of receipt.
- **TIMED**
  Utilized for those tests (e.g. glucose, drug level, or Troponin I) which require collection and testing at specific intervals. Result turnaround times may vary, usually within 1 hour of receipt.

The following requisition forms should be used when requesting laboratory tests. They are available from the lab during normal business hours.

General Laboratory Requisition Form

LOS ALAMOS MEDICAL CENTER

MEDICAL RECORD # _____

PATIENT INFORMATION **PERSON RESPONSIBLE FOR BILL**

PATIENT INFORMATION (SCREENED AREAS MUST BE FILLED IN)

PATIENT LAST NAME	FIRST NAME	MI	PATIENT ID	DATE OF BIRTH	SEX	FASTING
					M F	YES NO

MAILING ADDRESS | ORDERING PHYSICIAN (FULL NAME) | COMMENTS OR ADDITIONAL COPY OF REPORT TO:

CITY STATE ZIP PATIENT PHONE

SOCIAL SECURITY # PATIENT ONLY _ _

DATE COLLECTED | TIME COLLECTED AM PM | COLLECTED BY

WHEN MEDICARE PAYMENT WILL BE SOUGHT, ONLY TESTS WHICH ARE MEDICALLY NECESSARY SHOULD BE ORDERED.

BILL TO: ☐ PHYSICIAN/PROVIDER ☐ PATIENT RESPONSIBLE PARTY (ONLY IF PATIENT IS A MINOR)

SEE ATTACHED COPY OF CARD

☐ MEDICARE ☐ MEDICAID

SOCIAL SECURITY NUMBER ON INSURANCE CARD AND/OR MEMBER #: (LETTER)

___ ___ ___ - ___ ___ ___ ___ ___

☐ PHP ☐ BCBS ☐ United Health ☐ OTHER _____

PLAN NAME: _____ MEMBER ID NUMBER: _____

GROUP NUMBER: _____ EMPLOYER OF PRIMARY CARDHOLDER: _____

	AMA PANELS:	CPT	ICD-9
	Basic Metabol.	80048	
	Comp. Metabol.	80053	
	Electrolytes	80051	
	Liver Function	80076	
	Hepatitis Panel	80074	
	Lipid Panel	80061	
	Arthritis Panel	80072	
	O.B. Panel	80055	
	Renal Panel	80069	

	HEMATOLOGY:		ICD-9
	CBC c Diff.	85025	
	H & H	85018	
	Manual Diff.	85007	
	Retic. Ct.	85044	
	Sed. Rate	85651	
	URINALYSIS:		**ICD-9**
	UA	81000	
	Micro.	81015	
	Clinitest	81002	

	TDM:		ICD-9
	Carbamaz.	80156	
	Digoxin	80162	
	Dilantin	80185	
	Phenobarb.	80184	
	Theophyl.	80198	
	Valproic A.	80164	**ICD-9**
	COAGULATION:		
	PT	85610	
	PTT	85730	

	CHEMISTRY:		ICD-9
	AST/SGOT	84450	
	Amylase	82150	
	ALT/SGPT	84460	
	Bilirubin, total	82247	
	Bilirubin, direct	82247	
	Cholesterol	82465	
	HDL Cholest.	83718	
	GGT	82977	

	CHEMISTRY (cont.)		ICD-9
	GLU, fst	82947	
	GLU, rdm	82947	
	GlycoHgb.	83036	
	HCG, quant.	84702	
	HCG, qual.	84703	
	K+	84132	
	PSA	84153	
	TSH	84443	

	BLOOD BANK:		ICD-9
	ABO	86900	
	Rh	86901	
	Ab Screen	86850	

	SEROLOGY:		ICD-9
	Mono-spot	86308	
	RA	86430	
	RPR	86592	

	MICROBIOLOGY:		
	Culture, routine	87070	
	Anaerobic	87076	
	Blood culture	87040	
	Sensitivity	87186	
	Throat, full	87070	

	Rapid Strep.	87430	
	Strep. screen	87081	
	Occult blood	82270	
	Fecal WBC'S	87205	
	AFB culture	87118	
	Fungus cult.	87101	

	Giardia Ag	86674
	Gram Stain	87205
	Misc.	

SOURCE: TIME/DATE COLLECTED

OTHER TESTS: (Please write ICD-9 code next to each test ordered)

Ordering Physician: _____ Written By: _____

FM5373 (Rev. 3/07)

Pathology Requisition Form

LOS ALAMOS MEDICAL CENTER
Los Alamos, New Mexico 87544
PATHOLOGY REPORT

Lab #

Tissue Submitted	☐ Gross Only ☐ Gross & Micro	Patient I.D.

Clinical Data & Pre-operative Diagnosis

Operative Findings	Surgeon

Gross Description & Histologic Examination

Pathologic Diagnosis:

Pathology Frozen Section Requisition Form

LOS ALAMOS MEDICAL CENTER

LOS ALAMOS, NEW MEXICO

PATHOLOGY REPORT

(FROZEN SECTION)

CLINICAL DIAGNOSIS:	PATIENT I.D.
SURGEON:	

FROZEN SECTION DIAGNOSIS COMMENT

A. MALIGNANT ( )

B. BENIGN ( )

C. INDETERMINATE ( )

Los Alamos Medical Center Cytology Requisition Form

Los Alamos Medical Center

CYTOLOGY

P.O. Box 3917, Los Alamos, NM 87544
Phone (505) 662-4201 Toll Free in NM 1-800-541-8790

Operated by Lutheran Hospitals and Homes Society
Fargo, North Dakota 58102

PATIENT I.D.

LAB#

☐ ROUTINE REQ. BY

☐ ASAP FOR DR.

☐ STAT COLLECTION: DATE: TIME:

☐ INPATIENT ☐ OUTPATIENT

ROOM #

CYTOLOGY **Please Complete For All Cytology Specimens**

FOR CYTOLOGY RESULTS:

OR INFORMATION
CALL 662-4476
CALL 820-5921

PERTINENT CLINICAL INFORMATION:

☐ PREV. MALIGNANCY: DATE / TYPE:

☐ PREV. / CONCURRENT BIOPSY: DATE / TIME

☐ TREATMENT: DATE / TYPE:

LEVEL OF SUSPICION FOR MALIGNANCY
FOR THIS SPECIMEN HIGH _____ LOW_____

Gynecological

☐ **PAP SMEAR** # Of Slides _____

Site: ☐ Vagina ☐ Cervix
☐ Endocer. ☐ Other

LMP: _____
☐ IUP
☐ Post-Partum/Lactating
☐ Hormonal Contraceptives
☐ IUD
☐ Hormone Therapy
Type: _____
☐ Hysterectomy
Reason: _____

PREV. SMEARS: Date _____
☐ Normal
☐ Abnormal: Type _____

Non-Gynecological

ASPIRATIONS:

☐ Cyst ☐ Solid ☐ Size: _____
SITES:
☐ Breast ☐ Rt. ☐ Lt.
☐ Lung: Site _____
☐ Lymph Node:
Site: _____
☐ Pelvic Mass:
Site: _____
☐ Salivary Gland:
Site: _____
☐ Other:
Site: _____

MISCELLANEOUS

☐ Nipple Discharge ☐ Rt. ☐ Lt.
Of Slides _____
☐ Other: Site: _____

RESPIRATORY:

☐ Sputum ☐ Induced
☐ Bronchoscopy Site: _____
☐ Bronch. Wash
☐ Bronch. Brush
☐ BAL
☐ Pneumocystis c. INDUCED SPUTUM OR BRONCH. WASH ONLY

BODY FLUIDS, EFFUSIONS

☐ Pericardial Fluid
☐ Peritoneal Fluid
☐ Pleural ☐ Rt. ☐ Lt.
☐ CSF (cerebrospinal fluid)
☐ G.I. Tract:
Site: _____
☐ Other:
Site: _____

Urologic Specimens

☐ **URINE** ☐ Voided ☐ Cath.
☐ **RENAL PELVIS / URETER:** ☐ Rt. ☐ Lt.
☐ **BLADDER WASHING**

	Yes	No		Yes	No
Irritative Voiding Symptoms	☐	☐	Cystoscopy Abnormal	☐	☐
Previous Tumor	☐	☐	Papillary Lesions Seen	☐	☐
Recent Chemotherapy	☐	☐	Biopsy Taken	☐	☐
Radiation Therapy	☐	☐	Microhematuria	☐	☐
Previous Urologic Surgery	☐	☐	Ileal Conduit present	☐	☐
Nephrolithiasis	☐	☐			

Thyroid Specimens

☐ **Thyroid** ☐ Rt. ☐ Lt.

Thyroid Function Tests: ☐ Hyperthyroid ☐ Euthyroid
Radioisotope Scan Results: _____
Antibody Status: (i.e. Antimicrosomal Antibodies, Antithyroglobulin Antibodies.)
_____

Thyroid Mass: ☐ Solid ☐ Cystic
If cystic, does it disappear post aspiration? ☐ Yes ☐ No
History of previous neck radiation ☐ Yes ☐ No
Family history of thyroid disease ☐ Yes ☐ No
Level of suspicion for malignancy: ☐ High ☐ Low

PLEASE DO NOT WRITE BELOW THIS LINE

Cytologic Diagnosis:

CYTOTECHNOLOGIST DATE

PATHOLOGIST DATE

PAP Smear Cytology Requisition

LOS ALAMOS MEDICAL CENTER
ATTN: LAB
3917 WEST RD
LOS ALAMOS, NM 87544
Account Number: 0001798 5056619540

Referring Clinician:

Ordering Clinician Signature Required _____

Pathology Consultants of New Mexico
The Right Path
600 N Richardson • PO Box 2208 • Roswell, NM 88202
(575) 622-5600 • (800) 753-7284 • Fax (575) 622-3720
www.pcnm.com

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ORIGINAL TO PCNM - COPY FOR THE PATIENT'S CHART

PATIENT INFORMATION

Last Name	First Name	MI
SSN	DOB	
Mailing Address		Apt#
City	State	Zip
Phone	Sex	ID
Send a copy of the report to		
Collection Date		
Performing Clinician		

INSURANCE COMPLETE OR ATTACH COPIES OF FACE SHEET OR INSURANCE CARD(S) FRONT AND BACK

PCNM files **ALL** Insurances	PRIMARY	SECONDARY
*MEDICARE		
MEDICAID		
BCBS		
CIGNA		
UNITED HEALTHCARE		
HEALTHSMART		
LOVELACE COMMERCIAL		
PRESBYTERIAN COMMERCIAL		
HCH COMMERCIAL		
PATIENT		
CLIENT BILL		
OTHER		

PRIMARY INSURANCE INFORMATION *(Required)*
Name
ID
Group #
Insurance Company Address
Subscriber's Employer

SECONDARY INSURANCE INFORMATION *(Required)*
Name
ID
Group #
Insurance Company Address

✻ Medicare patients must **review** and **sign** the separate **ADVANCED BENEFICIARY NOTICE (ABN)** for services that may not meet Medicare's medical necessity or frequency limitation criteria.

HISTOLOGY

Indicate Site and Specimen Type

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

PRE-OPERATIVE DIAGNOSIS

POST-OPERATIVE DIAGNOSIS

CLINICAL HISTORY

SPECIAL INSTRUCTIONS

NON-GYNECOLOGIC CYTOLOGY

Source

Level of Clinical Suspicion
☐Low ☐High
Level of Radiologic Suspicion
☐Low ☐High

CYTOLOGY

GYN SOURCE
☐Vaginal ☐Endocervical
☐Cervical ☐Other _____

PAP TEST REQUESTED *(Check one)*
☐ThinPrep® Pap Test ☐Conventional Smear
☐DNA w/Pap™ HR
(HPV & ThinPrep® Pap for women age 30 and over)

MOLECULAR TEST *(Check all that apply)*
☐HPV High Risk Reflex if ASC-US
☐HPV High Risk Reflex if ASC-US and above
☐HPV High Risk Profile
☐HPV High/Low Risk Profile
☐HPV High Risk Profile Only/**No Pap Test**
☐HPV High/Low Risk Profile Only/**No Pap Test**
☐CT/NG
☐CT/NG Only/**No Pap Test**

CLINICAL INFORMATION
LMP/Menopause *(date)* _____
Last Pap Test *(date)* _____
History of abnormal Pap *(date)* _____
Results _____
History of biopsy *(date)* _____
Results _____

☐Laser/Cryo ☐Abnormal bleeding
☐BCP ☐Postpartum
☐Cervicitis ☐Pregnant
☐Colposcopy ☐Postmenopausal
☐Cone/LEEP ☐Supracervical hysterectomy
☐Hormones ☐Total hysterectomy
☐Vaginitis ☐Other _____
☐Radiation

DIAGNOSIS CODES

☐ 626.8	Abnormal bleeding
☐ 795.00	Abnormal glandular Pap smear of cervix
☐ 795.01	ASC-US (cervix)
☐ 795.02	ASC-H (cervix)
☐ 622.11	Cervical dysplasia (CIN I)
☐ 795.05	Cervical high risk HPV DNA positive
☐ 616.0	Cervicitis and endocervicitis
☐ 617.0	Endometriosis of uterus
☐ 626.2	Excessive or frequent menstruation
☐ 795.04	HGSIL (cervix)
☐ V15.89	High risk screening
☐ 795.03	LGSIL (cervix)
☐ 627.3	Postmenopausal atrophic vaginitis
☐ 627.1	Postmenopausal bleeding
☐ V72.31	Routine gynecological examination
☐ V76.2	Routine cervical Pap
☐ V73.81	Special screening for human papillomavirus (HPV)
☐ V74.5	Special screening for venereal disease
☐ 623.5	Vaginal discharge
☐ 623.0	Vaginal dysplasia (VAIN I and II)
☐ V76.47	Vaginal Pap smear status-post hysterectomy for non-malignant condition
☐ 616.10	Vaginitis and vulvovaginitis
☐ Other	_____

LABORATORY USE ONLY

CT	QC	QC2	PATHOLOGIST

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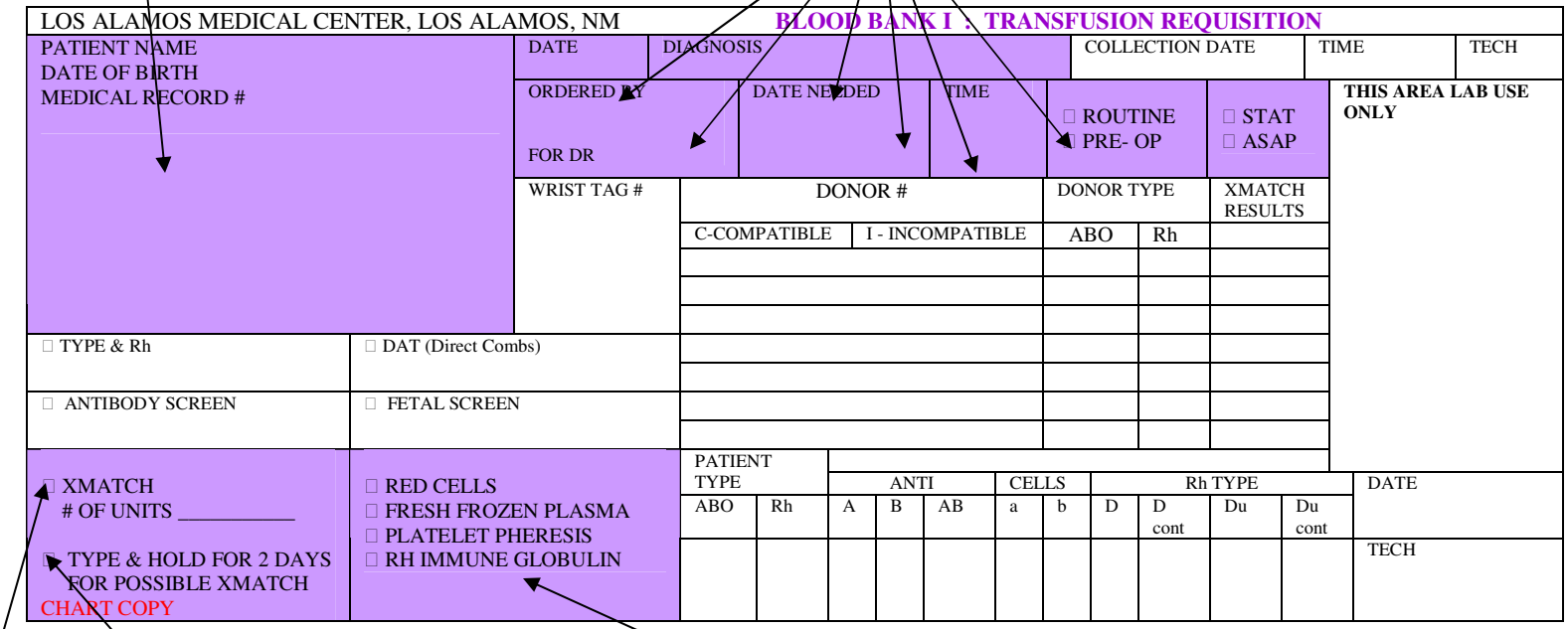
BLOOD BANK 1

When ordering a Type and Screen or a Crossmatch on a patient the following form(s) must be submitted to the laboratory. The shaded areas need to be filled out appropriately.

1. Place a sticker on **each** page of the requisition In this area, or fill out the requested information.

2. Fill in the appropriate information.



LOS ALAMOS MEDICAL CENTER, LOS ALAMOS, NM — BLOOD BANK I : TRANSFUSION REQUISITION

PATIENT NAME
DATE OF BIRTH
MEDICAL RECORD #

DATE | DIAGNOSIS | COLLECTION DATE | TIME | TECH

ORDERED BY
FOR DR

DATE NEEDED | TIME | ☐ ROUTINE ☐ PRE- OP | ☐ STAT ☐ ASAP

THIS AREA LAB USE ONLY

WRIST TAG # | DONOR # | DONOR TYPE | XMATCH RESULTS

C-COMPATIBLE | I - INCOMPATIBLE | ABO | Rh

☐ TYPE & Rh | ☐ DAT (Direct Combs)

☐ ANTIBODY SCREEN | ☐ FETAL SCREEN

☐ XMATCH
OF UNITS _____

☐ TYPE & HOLD FOR 2 DAYS FOR POSSIBLE XMATCH

CHART COPY

☐ RED CELLS
☐ FRESH FROZEN PLASMA
☐ PLATELET PHERESIS
☐ RH IMMUNE GLOBULIN

PATIENT TYPE		ANTI			CELLS		Rh TYPE				DATE
ABO	Rh	A	B	AB	a	b	D	D cont	Du	Du cont	
											TECH

3. For a Type and Screen check this box.

4. For a Crossmatch check this box and indicate the number of units requested. You will also need to submit a Blood Bank 2 form for each unit requested.

5. Check the box next to the product being requested.

BLOOD BANK 2

A Blood Bank 2 form must be submitted for **each unit ordered**.

1. Place a sticker on **each** page of the requisition in this area, or fill out the requested information

LOS ALAMOS MEDICAL CENTER **BLOOD BANK 2 TRANSFUSION RECORD** CHART COPY

IF NOT USED WITHIN TWENTY MINUTES, RETURN UNIT DIRECTLY TO BLOOD BANK.
WHEN TRANSFUSEION IS COMPLETED OR DISCONTINUED, RETURN THIS UNIT TO LABORATORY AND ALONG WITH IT RETURN THIS FORM WITH TRANSFUSION AND REACTION RECORD FILLED OUT. IF REACTION OCCURRED, PHONE LABORATORY. IF THERE IS A DELAYED TRANSFUSION REACTION, INCLUDING HEPATITIS, NOTIFY LABORATORY ASAP.

PATIENT NAME
MEDICAL RECORD#
DATE OF BIRTH

PATIENT TYPE

WRIST TAG # DONOR NUMBER

ABO Rh

☐ RED CELLS ☐ FRESH FROZEN PLASMA
☐ PLATELET PHERESIS ☐ RH IMMUNE GLOBULIN

	DATE	TIME	SIGNATURE
RECEIVED			
RETURNED			

LAB USE ONLY ☐ RESUABLE ☐ DISCARDED

SPLIT NUMBER

If blood must be given as emergency without crossmatch, call blood bank**.**

BEFORE GIVING BLOOD

I HAVE:

1. **verified the patient's name and hospital no. and matched them with the name and no. on this slip and on the blood bag.**
2. matched donor no., wrist tag no., ABO and Rh type on the blood bag with donor no., wrist tag no., ABO and Rh type on this slip, as well as wrist tag on patient.

SIGNATURE: _____ R.N.

SIGNATURE: _____ R.N.

TRANS-FUSION	DATE	TIME	TEMP	PULSE	BP	RN	AMOUNT GIVEN
STARTED							
STOPPED							

REACTION ☐ NO ☐ YES **TYPE OF REACTION**: ☐ CHILLS ☐DYSPNEA ☐NAUSEA ☐ HEADACHE ☐ JAUNDICE ☐ SHOCK ☐ ITCHING ☐ BACKACHE ☐ RASH ☐ OTHER: _____

SIGNATURE: _____

Los Alamos Medical Center Laboratory

Computer Downtime
Requisition Form

Patient Name: _____ MR#:_____

Date of Birth: _____ Date: _____

Account # (if available) **:_____ Patient Location: _____**
Labs should be Drawn:
Date: _____ Time: _____

Ordering Physician/Practitioner: _____

Ordering Department: _____

Priority: ____ Routine ____ Timed ____ASAP ____ STAT

<u>Diagnosis Information:</u>

<u>Laboratory Procedures Requested: (Please print clearly)</u>

Person Completing Request: _____

Phlebotomist: _____ Date:_____ Time: _____

Criteria for the Acceptance / Rejection of Laboratory Specimens

Acceptance Policy

- A patient's full name and a second identifier (MR# or Date of Birth) are required.
- A written order from the physician that has been filled out properly and signed by the physician is needed.

Specimen Rejection Criteria:

Blood

- Any specimen received which is not labeled with the patient's full name, date of birth, date and time drawn, and collector's initials.
- Any specimen for crossmatch which does not have a Blood Bank Identification number on it matching the wrist band on the patient. Patient must be banded at the time the blood is drawn.
- Any specimen which is obviously contaminated or rancid.
- Specimens more than 1 hour old for acetone or ammonia determinations.
- Blood for alcohol determination collected with an alcohol wipe preparation of the venipuncture site.
- Specimens for which fasting specimens are required that are known to have been collected in a non-fasting state. See individual procedures.
- Specimens for which timed collection is critical that are not collected at the proper time. These include glucose tolerance, lactose tolerance, drug levels, and Troponin I.
- Specimens of insufficient quantity. Some exceptions will occur. Sample should not be discarded even though quantity is not sufficient.
- Hemolized specimens will invalidate many chemistry tests, Hemolysis should be avoided whenever possible.

Urine

- Any specimen received which is not labeled with the patient's full name, date of birth, and date and time drawn.
- Any specimen collected in a non-sterile container.
- Urine unrefrigerated for more that 2 hours will be rejected.
- Any specimen which is obviously cloudy and characterized by extremely rancid smell, indicating bacteria multiplication in vitro.
- Urines known not to be collected at the proper time for those procedures requiring special timed voiding. See individual test procedure.
- Leaking containers.

Body Fluids

- Any specimen received which is not labeled with the patient's full name, date of birth, date and time drawn, and source.
- Any specimen which is obviously grossly contaminated or rancid
- Any specimen collected in a non-sterile container.

Cultures

- Any specimen received which is not labeled with the patient's full name, date of birth, date and time drawn, and source.
- Any specimen (except stool) not collected aseptically.
- Any specimen which has not been brought to the lab immediately, placed in proper transport media, or refrigerated.
- Specimens that are grossly contaminated externally or specimens in leaky containers.
- Any specimen collected in a non-sterile container.

Anatomic Pathology

- Any specimen received without proper identification is to be returned immediately to the OR for correction. See submission requirements.
- Any specimen without a brief clinical history is to be rejected.

Cytology

- Any specimen received which is not labeled with the patient's full name, date of birth, date and time collected, and type and source of collection.
- Requisition must be properly filled out.
- All gynecological Pap smear requests should include age, last menstrual period, pertinent medications, and any other pertinent history including previous suggestive Pap smear results.
- Specimens should be in proper fixative. See SOP Cytology-General Information.

If a specimen does not meet the stated requirements, it is at the discretion of the technologist performing the indicated test as to whether the specimen will be accepted or rejected.

If the integrity of a specimen is suspect in any way it will be rejected.

Any mislabeled or incorrectly labeled transfusion service specimens will be rejected.

When a specimen is unacceptable for testing the office of the ordering physician will be notified and the patient will be contacted.

Laboratory Critical Values

All critical values must be verified by repeat analysis and called to the doctor. If the doctor cannot be reached, the physician on call or the designated nurse should be notified. Documentation of the time and person to whom the result was reported to must be made on the patient's HMS report, along with the technologist's initials and verification of read back.

Chemistry Department

Test	Values less than	Values greater than	Exceptions
Sodium	125 mEq/L	155 mEq/L	
Potassium	3.5 mEq/L	6.0 mEq/L	
Calcium	7.0 mg/dL	11.5 mg/dL	Renal Patients <5.0mg/dL
Glucose	50 mg/dL	400 mg/dL	
Amylase		1500 U/L	
Creatinine		6.0 mg/dL	
Neobilirubin		15.0 mg/dL	
pH	7.15	7.55	
pCO2	10 mmHg	60 mmHG	
HCO3	10 mEq/L	45 mEq/L	
24 hour Urine Total Protein		300mg / 24hr.	Pregnant Women only.
Troponin		2.0 ng/mL	
Acetaminophen - 4 hours post ingestion		150 ug/ml	
Acetaminophen- 12hrs post ingestion		50 ug/ml	
Carbamazepine		10 ug/ml	
Digoxin		2.0 ug/ml	
Gentamicin, peak		10 ug/ml	
Gentamicin, trough		2.0 ug/ml	
Lithium		2.0 mEq/L	
Phenobarbital		40 ug/ml	
Phenytoin		20 ug/ml	
Salicylate		300 mg/L	
Theophylline		20 ug/ml	
Valproic Acid Vancomycin		150 ug/ml 20 ug/ml	

Urinalysis Department

Test	Values less than	Values greater than	Exceptions
Ketones		Positive	Newborn only
Glucose or Clinitest		Positive	Newborn only
RBC Cast		Any seen	

Hematology / Coagulation Department

Test	Values less than	Values greater than	Exceptions
Hemoglobin	6.0 g/dL	21.0 g/dL	
Platelets	25	995	
WBC	ANC<500	50,000	
Protime		38.9 sec	
PTT		100 sec	
Fibrinogen	100 mg/dL		

Microbiology Department

Positive Gram Stains on Spinal Fluid
Oxacillin Resistant Staph (MRSA)
Vancomycin Resistant Enterococcus (VRE)
Positive C. difficile toxin
All State of NM reporting Requirements
Positive Blood Cultures
Positive CSF Cultures

Transfusion Services Department

Positive DATs
Positive Antibody Screens

Specimen Collection Instructions

Specimen Collection

Instructions to patient specimen collection are available in this section of the manual. Please photocopy and distribute as needed.

General Information

- The value of any laboratory report is directly related to the quality of the specimen which is analyzed.
- In order to ensure the collection of a quality specimen, follow collection and labeling instructions carefully and transport specimens to the laboratory as instructed in this manual.
- The alphabetical test listing contains the appropriate specimen containers for each test performed in this facility and for the most commonly requested sent out tests. If the test that is requested is not contained in this listing or if there is any question regarding the type of specimen that should be collected, **please contact the laboratory for appropriate collection instructions.**

Labeling of Specimens:

1.	Properly identify the patient.
2.	Collect specimen.
3.	While still in the patient's presence label the specimen with the following information: • Patient's full name • Date of Birth • Date and time of specimen collection • Initials of the person collection the specimen • Hospital number (if available). If available bar-coded collection labels are acceptable for all non-transfusion service testing, however collector's initials should be on the label.
4.	Specimens for Transfusion service testing must be labeled with the above information using a Blood Bank Typenex Band.
5.	Deliver the specimen to the laboratory as soon as possible.

Procedure notes

- If the specimen does not meet the labeling requirements, it is at the discretion of the technologist performing the indicated test as to whether the specimen will be accepted or rejected.
- If the integrity of the specimen is suspect in any way the specimen will be rejected.
- Any mislabeled or incorrectly labeled transfusion service specimens will be rejected.

Examples of properly labeled specimen tubes

Collection of Specimens for Crossmatch or Type and Screen

Purpose

.

This procedure provides instructions for the collection of specimens that will be used in the transfusion service. Critical to the safe practice of transfusion medicine is the collection of a properly labeled blood sample from a correctly identified patient for pretransfusion testing. The phlebotomist who collects the blood sample must positively identify the patient, correctly complete the armband, and properly label the tubes.

Policy

Specimens not collected and labeled properly will be rejected. Blood Bank specimens used for transfusion must be collected by hospital personnel.

Specimen Collection, Handling, Storage

- 6 mls of whole blood in an EDTA lavender top specimen is preferred, a 7ml plain red top is acceptable.

- Whenever a new specimen is drawn, a new Typenex Blood Bank band must be used and the old one must be removed by the phlebotomist.

- Time of Specimen Collection
    - When a patient has been transfused or pregnant within the last 3 months, or when such information is unavailable or questionable, a sample of the patient's blood must be obtained within 72 hours of the scheduled transfusion.
    - For patients that have **not** been transfused, or the patient is only being given platelets the specimen may be collected up to 5 days prior to transfusion. However the ABO, Rh type, and antibody screen must be performed within 48 hours of collection.

Equipment / Supplies

Blood Bank I requisition
Blood Bank II requisition
Typenex Blood Bank Band
Phlebotomy Supplies

Special safety precautions

Universal precautions should be followed at all times.

Procedure

1.	Verify the requisition is filled out properly and includes the following information: • Patient's full name (spelled correctly) • Patient's Medical Record number • Patient's Date of Birth • Location of patient • Tests ordered, including the number of units needed • Date units to be transfused (if known) • Physician ordering the test • Status of test (Emergency, Pre-op, ASAP, etc.) • Diagnosis
2.	Identify the patient. See procedure PHL01v1: "Identifying Patients for Specimen Collection."
3.	If the patient is an outpatient they must read and sign an instruction form outlining the purpose and care of the Typenex Blood Bank Band.
4.	Fill out the Typenex band using the information on the hospital ID bracelet and the patient. The band should have the following information: • Patient's full name (spelled correctly) • Date of Birth • Medical Record number • Date and time of draw • Collector's initials
5.	Draw a plain red top and a lavender top tube. See SOP Collection of a Blood Specimen by Venipuncture.
6.	Remove the self-stick label from the Typenex Band and use it to label the red top tube.
7.	Place the Typenex band on the patient's wrist; remove the series of ID numbers on the band after it has been sealed.
8.	Write the date and time of collection and the collector's initials on the Blood Bank I requisition.
9.	Place an ID sticker from the Typenex band on the Blue Copy of the Blood Bank I requisition.
10.	Deliver the specimen and all paperwork to the Laboratory.

Procedure notes

- When a patient has been transfused or pregnant within the last 3 months, or when such information is unavailable or questionable, a sample of the patient's blood must be obtained within 72 hours of the scheduled transfusion.
- All inpatient requests and ER patients that have the potential of being transfused should be received on a Blood Bank I requisition form.

Correct order of Draw

In order to prevent contamination and ensure accurate laboratory results specimens must be drawn in the proper order.

1	Blood Culture Bottles	ALWAYS drawn prior to other labs to reduce contamination. Special Sterile Procedure is Necessary. NO EXCEPTIONS.		
2	Light Blue		3.2% Sodium Citrate	PT, PTT, Fibrinogen, Factor Activity Tube MUST be filled 100% - No Exceptions
3	Gold Top		Contains clot activator and gel for serum separation	Chemistry, PSA, TIBC, Digoxin, Lithium
4	Red Top		No Additive	Most send out tests, Call lab to verify correct tube.
5	Green Top	 or 	Sodium or Lithium Heparin	Carbon Monoxide Do NOT use for Lithium Levels.
6	Lavender Top		EDTA anticoagulant	Blood Bank Specimens (Type and Screen and Crossmatch specimens must be properly banded) 6 mL tube CBC, Retic, ESR, A1C, BNP, D-dimer Ammonia levels – MUST be put on ice 4 mL tube
7	Grey Top		Sodium Fluoride / Potassium Oxalate	Stat Glucose Lactic Acid Level – MUST be put on ice.
8	Royal Blue		Special glass and stopper material	Trace Elements, special Toxicology testing

Collection Instructions:

Venipuncture Procedure:

1.	Verify that the tests ordered on the requisition match the tests ordered on the collection labels and initial requisition.
2.	Identify the patient. Two Patient Identifiers must be used.
3.	Ask the patient if they are currently on anticoagulant therapy, including aspirin. If yes, maintain pressure post venipuncture until bleeding has ceased.
4.	Position the patient so that he/she is comfortable, but also so the venipuncture site is accessible.
5.	Assemble necessary equipment and select appropriate tubes for the tests ordered.
6.	Explain procedure to the patient and family members if applicable.
7.	Select venipuncture site.
8.	Tie tourniquet 2 inches proximal to the area chosen for venipuncture. Tourniquet should be applied with enough tension to compress the vein, but not the artery (If tourniquet fails to dilate vein have patient open and close fist repeatedly and maintain a closed fist during venipuncture, releasing after successful insertion of the needle.
9.	Put on gloves and palpate the vein.
10.	Cleanse the site with an alcohol wipe in a circular motion beginning with the venipuncture site and spiraling outward to cover and area approximately 2 inches in diameter. Allow alcohol to dry. Do not touch the cleansed area with an unclean finger.
11.	Immobilize the vein by pressing just below the venipuncture site with your thumb and draw the skin taunt. (Gloves on)
12.	Position the needle holder or syringe with the needle bevel up and the shaft parallel to the path of the vein and at a 15-30 degree angle to the arm.
13.	Insert the needle into the vein.
14.	If using a syringe withdraw the blood slowly by gently pulling back the plunger of the syringe. If using evacuated tubes with a needle holder, grasp the holder firmly and push down on the collection tube until blood flows into the tube automatically.
15.	Release tourniquet as soon as a steady flow of blood is noted, and have patient relax their fist.
16	Continue to fill the required tubes in the appropriate order.
17.	Gently rotate each tube 5 – 10 times as you remove it to help mix the additive.
18.	Place a cotton ball or gauze pad above the venipuncture site.
19.	Apply slight pressure to cotton ball and remove the needle slowly and smoothly.

20.	Continue to apply firm pressure to the site, or ask the patient to do so if they are able, until the bleeding subsides. If patient is on anticoagulant therapy maintain pressure longer.
21.	Bandage the area.
22.	Label the tubes at the patient's side.
23.	Discard any used materials properly, utilizing appropriate sharps containers and biohazardous waste containers
24.	Process specimens appropriately for the tests ordered.
25.	Wash hands and tourniquet or use appropriate disinfectant after each use.

Procedure notes

Application of tourniquet for longer than 1 minute may cause hemoconcentration or hemolysis, which may result in variation of test values.

Capillary Puncture Procedure:

1.	Verify that the tests ordered on the requisition match the tests on the collection labels.	
2.	Identify the Patient.	
3.	Position the patient so that he/she is comfortable, but also so the capillary puncture site is accessible.	
4.	Select the appropriate incision site. IF • Performing a finger stick • Performing a heel stick	THEN • Use the middle or ring finger. See Figure 1. • Select an area at least 2mm away from previous wounds, and avoid edematous areas. See Figure 2.
5.	Clean the incision area with an alcohol wipe and allow to air dry, or dry with sterile gauze.	
6.	Remove the safety clip from the tenderfoot device.	
7.	Place the blade-slot surface of the device flush against the heel or finger.	
8.	Depress the trigger.	
9.	Immediately remove the device from the skin.	
10.	Wipe away the first drop of blood with a sterile gauze pad.	
11.	Fill the appropriate microtainers, taking care not to make direct wound contact.	
12.	When collection is complete apply gentle pressure to the wound with a sterile gauze pad until bleeding has ceased.	
13.	Apply bandage.	
14.	Label specimens appropriately.	
15.	Discard any used materials properly; utilizing appropriate sharps containers and biohazardous waste containers.	
16.	Process specimens appropriately for the tests ordered.	

Procedure notes

- When performing a heel stick on an infant it may help to warm the heel prior to incision. Place the heel in a diaper that has been saturated with warm water for 5min. prior to performing the heel stick.

Figure 1: Finger stick site

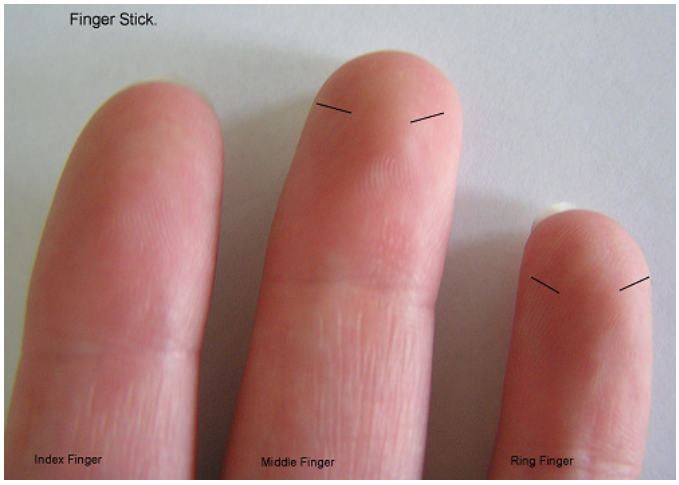
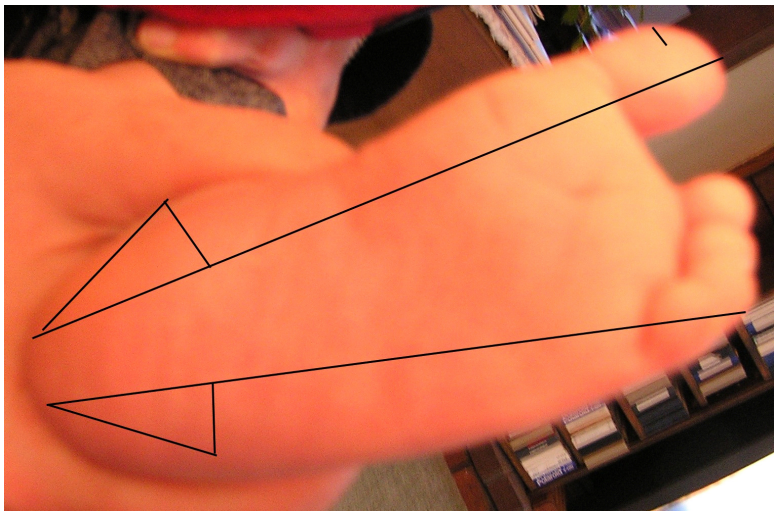


Figure 2: Heal Stick or Toe Stick



Instructions for collection of Mid-stream Urine specimen

If you have any questions, please call 661-9540

Female Patients (Clean Catch)

1.	Remove undergarments.
2.	Wash hands thoroughly with soap and water; rinse and dry them.
3.	Remove the towelettes from the package and place them on a clean surface.
4.	Loosen the lid of the sterile container; place the container on a clean surface.
5.	While sitting on the toilet with legs spread apart, spread the skin around the urinary opening. Keep skin spread until collection is complete.
6.	With one stroke from front to back, wash the skin on one side of the urinary opening using one of the towelettes.
7.	Repeat step 6 for the other side.
8.	Using another towelette wash the center from front to back.
9.	Remove the lid of the sterile container and place lid upside down on the clean surface.
10.	Grasp the cup so that fingers do not touch the inside surface.
11.	Begin to urinate in the toilet.
12.	After a few seconds of continuous urination and without stopping the flow of urine, fill the collection cup about half full.
13.	Place the cup on a clean surface and place the lid on top of it.
14.	Continue to urinate into the toilet.
15.	Upon completion, tighten the lid and place cup inside the small door next to the sink.
16.	Wash hands thoroughly with soap and water; rinse and dry them.
17.	Notify lab personnel that specimen has been collected on your way out.

Instructions for collection of Mid-stream Urine specimen

If you have any questions, please call 661-9540

Male Patients (Clean Catch)

1.	Wash hands thoroughly with soap and water; rinse and dry them.
2.	Remove the towelettes from the package and place them on a clean surface.
3.	Loosen the lid of the sterile container; place the container on a clean surface.
4.	If you are not circumcised the fore skin on the penis must be pulled back completely. If you are circumcised begin the cleansing procedure.
5.	Grasp the penis near the end with one hand.
6.	With your other hand wash the area around the urinary opening with one of the towelettes. Beginning at the center of the opening wash the area around the opening using a circular motion.
7.	Repeat the previous step with remaining towelettes.
8.	While still holding the end of the penis. Remove the lid of the sterile container and place lid upside down on the clean surface.
9.	Grasp the cup so that fingers do not touch the inside surface.
10.	Begin to urinate in the toilet.
11.	After a few seconds of continuous urination and without stopping the flow of urine , fill the collection cup about half full.
12.	Place the cup on a clean surface and place the lid on top of it.
13.	Continue to urinate into the toilet.
14.	Upon completion, tighten the lid and place cup inside the small door next to the sink.
15.	Wash hands thoroughly with soap and water; rinse and dry them.
16.	Notify lab personnel that specimen has been collected on your way out.

Instructions for Routine 24 hour Urine Collections

Please read carefully. If you have any questions, please call 661-9540

For your physician to receive accurate results on the tests that are ordered for you, please completely collect all of the urine that you produce for the entire 24 hour period.

Drink the usual amount of liquids during the collection period, unless instructed otherwise by your physician. Do not drink alcoholic beverages.

24 hour Urine Collection

1.	Empty your bladder and discard this urine.
2.	Record time and date of step 1.
3.	Collect all urine for the next 24 hours in the container provided.
4.	At the same time on the second day empty your bladder and include this specimen in the collection.
5.	During collection process container should be refrigerated or stored in a bucket of ice.
6.	Label the container with your name, date of birth, date and time collection was started, and the date and time of completion.
7.	Deliver specimen along with the laboratory requisition to the laboratory as soon as possible.

If you forget to save some of the specimens during the 24 hour period, you should discard the specimens that you have saved and start over on the following day.

Instructions for the collection of a Stool Specimen

Do not dip stool specimen from the toilet. Collect specimen as described below. When you return to the lab to deliver the specimen, do not forget your laboratory requisition. If you have any questions, please call 661-9540 for assistance.

For Stool Culture, OVA and Parasites, Clostridium Difficile: Stool specimen should be collected early in the illness and prior to antibiotic therapy. Collect specimen in a clean container with a tight fitting lid. Specimen should be free of contaminants such as urine or water. Label container with patient name, date of birth, date and time of collection, and name of ordering physician. deliver to the laboratory within one hour of collection.

For Occult Blood (Hemoccult or seracult slide): Go on a red meat free diet for three days and stay on the diet until all specimens are collected. Collect three different stool specimens. Specimens can be collected in a clean, disposable container such as a margarine tub or Cool Whip container. Each time you collect a specimen; open tab on card, use a tongue depressor to take a very small amount of stool specimen and apply thin smear of specimen in the two areas as instructed, close cover. Label each card with patient name, and date and time of collection. Store at room temperature. The patient may wait and bring all cards to the laboratory at one time.

Instructions for the collection of a Semen Specimen

1. A period of 2 -3 days of abstinence (no intercourse or masturbation) will provide the most accurate assessment; prior frequent ejaculation may reduce the sperm count and volume. However, there should be no more than 7 days of abstinence.

2. Please collect your specimen between 7am and 2pm, Monday thru Friday. It is important that we begin the analysis within one hour of collection, so please deliver the specimen to the lab immediately. The sample should be protected from extreme heat or cold during transport.

3. Your physician will provide you with a clean, wide mouth plastic container or you may also get one from the laboratory. Collect the specimen directly into the container. NOTE: The specimen should not be collected in a condom because some prophylactics contain spermicidal agents and may kill the sperm.

4. The sample must be obtained by Masturbation after the appropriate period of abstinence. Masturbation is preferred to interrupted intercourse because the later may result in loss of a portion of the ejaculate. Avoid using lubricants.

5. the specimen should be clearly marked with your name and date of birth. In addition please provide the following information:

   Name: **Date:**

   Collection Time:

   Days of Abstinence:

   Collected by Masturbation (circle one): **YES** **NO**

   Transportation Problems (circle one): **YES** **NO**

   Post Vasectomy Check (circle one): **YES** **NO**

6. If any portion of the ejaculate is not collected or if the container leaks during transport the specimen should be recollected.

The lab will notify your physician of the results. The result will be discussed with you at your next visit to your doctor's office.

Microbiological Specimen Collection Requirements

Collection of Specimens to be cultured:

- Whenever possible, specimens should be obtained before antimicrobial agents have been administered.
- Request forms accompanying specimens to be tested for antibiotic activity should contain the name(s) of the antibiotic(s) being administered.

Labeling

Microbiology specimens are not acceptable unless each specimen is appropriately labeled. The specimen must be identified by the patient name, date of birth, collection date and source of specimen. Slides must also be labeled with patient name, date of birth and collection date. Placing an unlabeled specimen into a container and then labeling the outer container is not acceptable.

Requisitions

A completed test requisition must accompany all samples. Information regarding the patient, the specimen, collection time and date, clinical history, symptoms and diagnosis, anti-microbial therapy and any suspected organism(s) is essential for the optimal and appropriate processing of
the specimen.

SPECIMEN COLLECTION FUNDAMENTALS

The proper collection of a specimen for culture is the most important step in the recovery of pathogenic organisms responsible for infectious disease. A poorly collect specimen may lead to failure to isolate the causative organism(s) and result in the recovery and subsequent treatment of contamination organisms.

1. Collect the specimen from the actual site of infection, avoiding contamination from adjacent tissues or secretions.
2. Collect the specimen at optimal times (for example, early morning sputum for AFB culture).
3. Collect a sufficient quantity of material.
4. Use appropriate collection devices: sterile, leak-proof specimen container. Use appropriate transport media.
5. Whenever possible, collect specimens prior to administration of antibiotics.
6. Properly label the specimen and complete the requisition slip.
7. Minimize transport time. Maintain an appropriate environment between collection time and delivery to lab. Contact lab for instructions if there will be a significant delay in transport.
8. If appropriate, decontaminate the skin surface. Use 70-95% alcohol and 1-2% tincture of iodine the site. Allow a contact time of two minutes to maximize the antiseptic effect.

Specific Guidelines for Specimen Collection

Aerobic Culture

Specimen collection from normally sterile sites requires a needle puncture or surgical procedure. Decontamination of the skin must be performed prior to the collection of specimens such as blood, cerebrospinal fluid and other normally sterile body fluids.

Blood Culture

Specimens for blood cultures must be submitted in blood culture bottles. Decontaminate the diaphragm tops of two bottles by swabbing with alcohol or iodine after removing the protective plastic covering. Fill bottles with approximately 6 – 8 ml of blood into each of the two bottles. Swirl bottles gently to mix. Keep at room temperature (15 – 30 $^{\circ}$C) until sent to laboratory.

Cerebrospinal Fluid

Submit a separate sterile screw-capped tube containing at least 0.75mL of cerebrospinal fluid. For microbiological analysis, it is best to submit the second or third tube drawn.

Other Sterile Body Fluids

Follow standard procedures and obtain the specimen by aspiration. If a cell count and chemistries are desired, inject 2mL of fluid into a lavender top and solid red top tube by switching out the collection needle.

Sputum Specimens

Early morning sputum collection is recommended. Patient should gargle with water prior to collection. The most suitable specimen is the expectoration obtained after a deep cough. Collect specimen in a leak proof, sterile, screw-capped container.

Urine Specimens

All patients should void the first portion of the specimen into the toilet, then secure the remainder of the specimen in a sterile container. Keep urine refrigerated until sent to the lab. To obtain a clean catch collection of urine please follow instruction found in Specimen Collection section of this manual. For indwelling catheters, obtain the specimen with a needle and syringe.

Stool Culture

Collect stool without urine contamination. Select portions of stool containing pus, blood or mucous and place in stool container. Transport to laboratory as soon as possible.

Wound Culture

Swab infected area, place swab into transport sheath and crush capsule at bottom of sheath. Transport to lab as soon as possible.

Anaerobic Culture

Specimens collected using Culturettes, and tissue samples are adequate only if transported to lab within minutes of collection. Specimens from the following sites are not acceptable:

- Throat or nasopharyngeal swabs
- Sputum and bronchoscopy specimens
- Feces and rectal swabs, except for C. diff cultures
- Voided or catheterized urines
- Superficial wounds

Nasopharyngeal Culture

Insert flexible fine-shafted sterile swab into nostril to the posterior nasopharynx and gently rotate. Place swab into Culturette sheath and transport to lab as soon as possible.

Ova and Parasite

A series of three specimens within a 10 day period is usually recommended. Collect stool without urine contamination. Transport to lab immediately, specimen must be placed into preservative within one hour of collection.

Collection of Histology Specimens:

All specimens must be accompanied by proper identification and appropriately labeled request form. They will not be accepted if they are not properly labeled and the request form not completely filled out.

Procedure:

1. All specimens should be placed in 10% formalin unless requiring fresh/frozen processing.
2. All requisitions should contain diagnosis or suspected diagnosis according to the clinical judgment of the surgeon.
3. Specimen should not be fragmented, dissected, opened, etc … prior to submission to the laboratory.
4. If margins are important, they should be clearly identified either personally by the surgeon or by marking in some manner, i.e., a stitch, India ink, etc.
5. Material submitted for culture must be collected in a sterile manner consistent with standard microbiological technique.

Fresh / Frozen Sections

All fresh/frozen sections are to be scheduled with the pathologist as far in advance as feasible. If an unexpected section is needed, the laboratory should be notified as soon as the potential is recognized. The pathologist must be notified by telephone or pager immediately.

Note: **DO NOT** leave fresh tissue unattended without notifying someone in the laboratory.

Collection of Cytology Specimens:

All specimens must be accompanied by proper identification and appropriately labeled request form. They will not be accepted if they are not completed and identified properly. This policy is necessary for protection of the patient.

Procedure

Body Fluid / Washings

All body fluid specimens should be delivered to the lab for processing within 20 minutes of collection. It is essential that all fluids submitted are placed in Cytolyte preservative within 20 minutes to ensure preservation of all cell lines. Cytolyte preservative is available in the histology section of the laboratory. Contact laboratory for voided urine cytology specimen instructions.

Tissue Scrapings

All tissue scrapings (Pap Smear, Secretions, etc…) must be collected by qualified personnel. Collect from the specific site. Spread evenly on a labeled, frosted-end glass slide. Fix immediately with spray fixative. Allow to dry before packaging for delivery to lab.

Fine Needle Aspiration

Notify the pathologist of the scheduled procedure as soon as possible. Specimen is normally obtained in the Radiology Department or in the surgeon's office.

LIS Downtime procedure

In the event of computer downtime, the individual sections of the laboratory will continue to function, maintaining complete information about each specimen tested for patient reporting and later input into the computer system.
PROCEDURE:

A. EMERGENCIES
1. In the event of electrical power outage:

a. The system administrator should be notified immediately.
b. All terminals and printers should remain powered on supported by the Hospital's Auxiliary Emergency Generator.

B. SPECIMEN PROCUREMENT
1. The lab assistants, technologists, or nursing services personnel will collect and deliver specimens utilizing the Lab Computer Downtime Requisition form. Refer to page 18 for requisition form.

2. Each Requisition will contain the following information:
a. Patient label (if available) or
b. Patient's name, Medical Record # and Account #.
c. Specific tests to be performed.
d. Priority (STAT, ASAP, Timed or Routine)
e. Ordering practitioner.
f. Collector's initials.
g. Collection date and time.

C. LABORATORY DEPARTMENT PROCESSING AND REPORTING
1. All specimens coming into the department must be accompanied by a downtime request slip. This slip will accompany the specimen to each department of the Laboratory for testing.
2. Specimens with previously printed HMS labels will have the label placed on the specimens for tracking purposes.
3. Any specimen comments should be noted on the request slip.
4. Once testing is completed, utilize the Manual Report Forms (see attached) to copy the analyzer results to which will be used for distribution to the ordering department or clinic.

Test Menu

The following table is a list of tests available through the Los Alamos Medical Center Laboratory. The list includes all tests currently performed on site and many of the more common send out tests. This list is not all inclusive, if you do not find what you are looking for please contact the laboratory for specimen collection and transport information.

Testing Priority:

As Ordered:	Testing will be performed as it is ordered. Results available next business day or sooner.
Send Out:	Testing not performed on site, specimens sent to reference lab. Results available in 3 to 5 business days for most tests.
Batched:	Testing performed once per day M-F.

Abbreviations used in the Testing List

Specimen Type

S	Serum
WB	Whole Blood
P	Plasma
U	Urine
F	Fluid
Stool	Fecal Material
Wash	Bronchial Wash
Sputum	Sputum
NP	Nasopharygeal Swab

Draw Tube

R	Red stopper, No Additive tube
L	Lavender stopper, EDTA anticoagulant
GS	Gold stopper, serum separator tube
LB	Light Blue stopper, Sodium Citrate anticoagulant
BC	Blood Culture Bottle
GR	Green stopper, sodium or lithium heparin anticoagulant
U	24 hour Urine Collection Container
BG	Blood Gas Syringe
GY	Gray stopper, Sodium Fluoride/Potassium Oxalate anticoagulant
V	Viral Culture Media
S	Sterile tube with ~ 1 mL saline

Listing of HCFA and AMA Approved Organ and Disease Panels

These are the only panels offered by Los Alamos Medical Center Laboratory.

Electrolyte Panel (80051)

- Carbon Dioxide
- Chloride
- Potassium
- Sodium

Basic Metabolic Panel (80048) **BMP**

- Carbon Dioxide
- Sodium
- Urea Nitrogen (BUN)
- Potassium
- Creatinine
- Glucose
- Chloride
- Calcium

Comprehensive Metabolic Panel (80053) **CMP**

- Carbon Dioxide
- Sodium
- Urea Nitrogen (BUN)
- Alkaline Phosphatase
- AST / SGOT
- Potassium
- Creatinine
- Glucose
- Bilirubin, Total
- ALT / SGPT
- Chloride
- Calcium
- Albumin
- Protein, Total

Lipid Panel (80061)

- Cholesterol
- HDL
- Triglycerides

Hepatic Function Panel (80076) **LFT**

- Albumin
- Bilirubin, Total
- Total Protein
- Alkaline Phosphatase
- ALT/ SGPT
- Bilirubin, Direct
- AST / SGOT

Obstetric Panel (80055)

- Hemogram
- HBsAG
- RBC Antibody Screen
- Rubella Antibody
- ABO Typing
- RPR
- Rh Typing

Acute Hepatitis Panel (80074)

- HBsAg
- Hepatitis C Ab
- HBcAb (IgM)
- Hepatitis A Ab (IgM)

Renal Function Panel (80069) **RFP**

- Albumin
- Chloride
- Phosphorous
- Urea Nitrogen (BUN)
- Calcium
- Creatinine
- Potassium
- Carbon Dioxide
- Glucose
- Sodium

Arthritis Panel (80072)

- Uric Acid
- Sedimentation Rate
- ANA
- RA Factor

Thank you for reviewing our manual. Please contact us if we can further serve you.