University of Colorado Hospital Policy and Procedure
Specimen Integrity

Related Policies and Procedures:

Patient Identification System
Blood Cultures
Bloodborne Pathogens Exposure Control Plan
Administration of Blood Components
Peripheral Blood Collection for Laboratory Testing

Approved by: Professional Practice, Policy and Procedure Committee
Medical Director of Clinical Laboratory
Director of Clinical Laboratory
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Description: This policy/procedure describes the Clinical Laboratory's requirements for safe submission and transport of patient specimens. These requirements are in alignment with the Joint Commission (JC) and Occupational Safety and Health Administration (OSHA) standards. Positive patient identification, proper specimen labeling, and proper collection, packaging and transport are required to protect patients and employees from adverse consequences of errors.

Accountability: All persons collecting and/or transporting specimens from University of Colorado Hospital inpatients, outpatients, and observation patients adhere to the following procedure for patient identification, specimen labeling, and packaging of specimens. Clinical Laboratory employees check all specimens that arrive in the laboratory for proper labeling and packaging. Laboratory staff alerts the caregiver when there is a problem.

Policy/Procedure:

I. Acceptable Identification of Specimens

A. On inpatients, positive patient identification is obtained by verification of patient name and medical record number on the patient wristband with the name and number on the requisition or on prepared specimen collection labels. When the wristband is absent, positive patient identification must be obtained from the physician or other health care provider who is directly knowledgeable about the patient. On outpatients, identification may be obtained directly from the patient, using a photo ID and address or date of birth, when possible.

1. Use of at least two identifiers (neither to be the patient's room number) whenever taking blood samples is a requirement of JC.

B. Proper labeling is done by putting the patient's full name and medical record number on each specimen. Alternatively, name and date of patient birth are acceptable. Electronic ordering system labels, embossed patient encounter card labels, and handwritten information are all acceptable providing the required information is complete and legible. Label the specimens in the presence of the patient/at the bedside.

1. **When reasonable, show the patient the collected and labeled blood tubes and ask them to verify their name and date of birth that appears on the labels.**

C. Transfusion Service specimens for compatibility testing must be labeled with the patient's **first and last** names, medical record number, the date of draw, the phlebotomist's initials, **and initials of a second hospital personnel verifying the identification of the patient**.

D. Microbiology specimens (e.g. blood cultures, culture swabs, fluid aspirations, etc.) must include the site of specimen collection on the label.

II. Unacceptable Identification of Specimens

Under ordinary circumstances, all specimens received by the laboratory must be collected again if the patient is unacceptably identified or if the specimen is received with no identification.

A. The following special specimens will be accepted without re-collection:
- cerebrospinal fluid
- body fluids such as peritoneal or synovial fluid
- bone marrow
- stones
- operative specimens
- special procedural collections (e.g. bronchoalveolar lavages, pelvic exam specimens)
- non-line arterial blood gases
- catheter tips

B. Unacceptably identified or unlabeled specimens obtained only after multiple attempts at collection from the patient will be accepted with approval of the laboratory pathologist on-call.

C. For all specimens that are not re-collected, the physician or person who originally collected the specimen must acknowledge the identity of the specimen in writing.

III. Unacceptable Specimen Types

A. Patient specimens that are submitted in incorrect containers, of insufficient volume, or without special handling where required are considered unacceptable and will require recollection. Laboratory staff will:
1. notify the caregiver that the sample is unacceptable,
2. log the requested test in to Cerner,
3. cancel the test in Cerner, documenting appropriate reason for cancellation,
4. credit the test, if results have already been verified,
5. and document notification of caregiver in Cerner, including name of person. Laboratory staff will make every attempt to process "unacceptable" specimen types, including referring testing to another laboratory if appropriate, when recollection of the specimen would involve great inconvenience or possible harm to the patient. This includes specimens as described in part II.A. of this document.

IV. Packaging

A. The primary container for all specimens must be leak-proof and must contain the patient's name and medical record number. Ensure that lids of containers are secure.

B. Each specimen must be placed inside a secondary container for transport. The secondary container is a securely sealed ziplock plastic bag labeled with the biohazard symbol described below.
C. OSHA requires that biohazard labels must be placed on all containers used to store or transport blood or other potentially infectious material. All labels must include the following legend:

Biohazard labels must be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Exception: Blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from this requirement.

D. Plastic bags with the biohazard symbol are obtained from Materials Management (item number 10897), or in small amounts from the Clinical Laboratory.
E. Limit contents to one patient's samples per bag.
F. Paper lab requests, if used, should be placed in the external sleeve of the bag or attached to the outside of the bag.
G. The laboratory will not accept or process specimens with exposed needles or sheathed needles attached. The lab will not accept urine or fluids in paper containers.

V. Methods of Transport

All specimens must be packaged as described above before delivery.

A. Hand Delivery
B. UCH Transport Services
C. Courier - Specimens transported from offsite clinics.
D. Pneumatic Tube System (PTS)

Proper loading of carriers is crucial for safe arrival of specimens at the laboratory. Failure to follow instructions may result in bloodborne pathogen exposure, tube system contamination, and interruption of tube system service during decontamination procedures.

1. *Use specially padded carriers only*. Do not use carriers without padding. Do not use towels or other substitute padding.
2. All specimen containers must be placed in a securely sealed ziplock bag (one patient per bag**)** labeled with the biohazard legend before placing in the carrier.
3. Do not overload carriers. Ensure that contents fit easily in carrier with padding intact. Recommended guideline: submit no more than six patients' samples in one carrier.
4. Urine specimens must be tightly sealed and double-bagged.

5. For specimens that must be transported "on ice", use frozen gel packs only (obtain from Clinical Laboratory).
6. Ensure that the carrier is latched securely before sending.
7. Do *not* send:
   - Needles
   - Surgical Pathology specimens
8. The Clinical Laboratory does not maintain the pneumatic tube system. *For problems with the tube system call Engineering Services 720-848-8351*.

VI. Leaking or Broken Specimen Containers

A. The laboratory may request a new sample and/or lab request when specimens arrive broken or leaking. For specimens which are difficult to replace (e.g. CSF), laboratory staff will make every attempt to salvage the sample.

B. Common reasons for breakages in the pneumatic tube system:
   - PTS carrier is overloaded.
   - Padding is insufficient or nonexistent.
   - Too many blood tubes are in one ziplock bag.
   - Small green top is bagged with blood culture bottles instead of separately.
   - Ziplock bag is not "zipped" and tubes are ejected from the bag.

C. If the problem appears to be caused by incorrect loading of the carrier, the originating unit manager or charge nurse is notified and the laboratory reports the unsafe condition in the web-based event reporting program.

References:

1. Comprehensive Accreditation Manual for Hospitals: The Official Handbook (CAMH), Standard PC.5.10, Joint Commission on Accreditation of Healthcare Organizations (JCAHO). January 2008. [LOE VI]
2. AABB Technical Manual, 16th Edition, p. 381, American Association of Blood Banks, 2008. [LOE VI]
3. CLSI, Clinical Laboratory Safety; Approved Guideline – Second Edition, GP17-A2, Vol. 24, No. 13, April 2004. [LOE VI]
4. CLSI, Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline—Third Edition, M29-A3, Vol. 25 No. 10, March 2005. [LOE VI]
5. Code of Federal Regulations, 42 CFR Ch. IV, Part 493 (Clinical Laboratory Improvement Amendments), 10-1-98 Edition, §493.1101 and §493.1103. [LOE VI]
6. Code of Federal Regulations, Occupational Exposure to Bloodborne Pathogens, Final Rule, Title 29, Part 1910.1030, 7/1/2003 edition. [LOE VI]
7. College of American Pathologists (CAP), Laboratory General Checklist, September 2007. [LOE VI]
8. OSHA Directive, Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens, CPL 2-2.69, November 2001. [LOE VI]
9. Standards for Blood Banks and Transfusion Services, 25th Edition, 5.1.6.6, American Association of Blood Banks, 2008. [LOE VI]

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