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|  | **Inpatient Phlebotomy Introduction**  **IPP#1** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**  To give guidelines to staff concerning the introduction for Inpatient Phlebotomy
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who performs procedure: Inpatient Phlebotomy staff

**Procedure:** Introduction for Inpatient Phlebotomy Procedure Manual

This manual has been compiled by the manager of the Phlebotomy department at NC Baptist Hospital with the approval of its medical director, Dr. Greg Pomper. The purpose of this manual is to guide and aid laboratory personnel and house staff by stating laboratory methods, procedures and policies.

New personnel use the manual to acquaint themselves with this laboratory’s policies and methods. Established employees use the manual as a reference for their annual competency review.

The manual is available in the Inpatient Phlebotomy Department at all times. Any laboratory employee or member of the house staff may reference the manual to answer and clarify operational and technical questions relating to the phlebotomy department. The manual is in paper form in the main lab, and available electronically in the department’s shared file (G:Lab\_Shared->Inpatient Phlebotomy->Inpatient Phlebotomy Procedure Manual 2019).

All policies and procedures are reviewed annually by all personnel and documented by a signature and a date.

An electronic version of Blood Collection procedures, services and limitations to services is available electronically in the Pathology Handbook on the Medical Center’s internal and external websites.

This manual is as current and complete as possible. Procedures may be updated on an on-going basis as deemed necessary by the section manager. These changes will be dated and initialed by the section manager or assistant manager as they are made. Retired or retyped procedures are retained for 2 years. All records associated with the collection of samples are retained for two years.

The Medical Director will approve all new procedures before they are added to the manual and his signature will appear on the first page of the procedure. The manual will be reviewed every two years by the Medical Director.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: Pathology Record Retention Policy**
2. **References: GEN.40050, COM.10300, COM.10050, GEN.20377**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Inpatient Phlebotomy Scope of Service and General Information**  **#IPP2** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**  To give guidelines to staff concerning the scope of services for the Medical Center
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure:** The Role of the Phlebotomist
   1. Inpatient Phlebotomy provides the following services for the Medical Center 24 hours a day, 7 days a week.
   2. The Role of the Phlebotomist
      1. The collection of the blood sample is an important pre-analytical step for the test to be performed in the laboratory. The accuracy of the result is as dependent on this step as the actual testing and reporting.
      2. The phlebotomists take care to follow universal precautions and provide for the safety of the patient by assuring proper identification of patients, selection and preparation of the appropriate site, perform skin penetrations with as little trauma as possible, obtaining appropriate samples for test requested, caring for the site, and leaving the patient with a positive impression.
      3. Phlebotomists maintain a professional image in their manner of dress and behavior. Their role is as much ambassador for the laboratory as it is as blood collector. They respect the privacy and confidentiality of the patients.
      4. Phlebotomists approach their patients in a calm reassuring manner and introduce themselves. Respect and courtesy is extended to all patients, their friends, and family.
      5. Phlebotomists are prepared to care for patients who experience adverse reactions from the phlebotomy procedure.
      6. The phlebotomist promptly sends specimens to the laboratories.
      7. Any uncollected sample should be communicated to the nurse or provider and documented in the patient’s EMR. A signature is obtained from the nurse to document the communication. The slips are retained for 2 years.
      8. The phlebotomists work as a team. They help their co-workers complete tasks on time. Each member of the team treats everyone with respect and courtesy.
2. Patient Feedback
   1. Phlebotomists may get patient feedback through the Press Gainey Survey and Wow Cards.
      1. Results of this survey and staff members mentions are maintained by the Patient and Family Relations office and electronically on the Press Ganey Website.
      2. Monthly emails are sent out with survey results and staff members that are mentioned.
      3. Staff that are mentioned in a positive way receive a “WOW” certificate.
   2. Patient concerns brought to the phlebotomist’s attention are forwarded to the manager or supervisor by phone call, email, or direct conversation. Documentation will be made as appropriate by the manager.
3. Feedback to Phlebotomists on issues relating to specimen quality and safety
   1. Received verbally (phone or meeting), written (interoffice mail, meeting) and/or electronic (e-mail, RL6 patient safety reporting software)concerning specimen quality
   2. The shift Coordinator or Manager will research the concern, and meet with the employee to discuss future actions to avoid a recurrence of the event
   3. The meeting is documented in the RL6 software and on the RL6.xlsx spreadsheet in the Inpatient Phlebotomy Coordinators shared folder (G: Lab\_Shared->Inpatient Phlebotomy Coordinators)
   4. Generic reminders related to specimen quality are shared via email and staff meetings.
4. Employee Feedback
   1. Employees provide feedback when lab/quality/safety concerns arise.
   2. The Manager determines the level of action regarding the method of following up
      1. Risk Management
      2. Infection Prevention
      3. Administration
   3. There is a CAP sign regarding the reporting of quality concerns posted in the main lab.
5. Error Discovery and Reporting
   1. On the occasion that an error is discovered and a report needs to be corrected, corrections will be called to the appropriate caregivers. The result will flag in the laboratory information system that it is a corrected report. The corrected result must have the name of the person, date and time of the call appended to the corrected results as well as the reason code for the correction. I
   2. If a credit results from that error, complete the credit form and send it to the Billing Office
   3. Notify the section manager of any incorrect result that is reported.
   4. Deviations in Standing Operating Procedures that result in adverse patient outcomes require a CAPA (Corrective Action/Preventive Action).
6. Feedback from Vendors and Manufacturers
   1. Is received electronically and responded to via the ECRI alert system.
   2. Technical recalls are referred to the specific lab and Lab Director.
7. Provider Feedback is provided by a quarterly survey that is distributed by the Medical Director.
8. Personnel requirements include a minimum of a High School Diploma and the following:
   1. Phlebotomy Tech I-entry level with ASCP certification eligibility within 1year
   2. Phlebotomy Tech II-ASCP Certification and basic experience
   3. Phlebotomy Tech III-ASCP Certification and at least 2 years with the department
   4. Phlebotomy Coordinator-ASCP Certification, at least 5 years with the department, and strong leadership skills.

The Management Tier for Inpatient Phlebotomy

Medical Director

Lab Administration

Manager

Phlebotomy Coordinator

Phlebotomy Technician III

Phlebotomy Technician II

Phlebotomy Technician I

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: Pathology Event Documentation; Pathology Customer Satisfaction Survey; Pathology QA/QA /QM Management; Product Recall and Alert Notifications (ECRI); CAPA; Reporting Quality Issues; Event Documentation; Environmental Health and Safety Training; Reporting Quality Issues; CAP Accreditation**
2. **References: GEN.20325, GEN.20330, GEN.20335, GEN.20340, GEN.20374, GEN.40499**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Standard Dress for the Phlebotomy Team**  **IPP#3** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Standard Dress.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who Performs procedure: Inpatient Phlebotomy
2. **Procedure:**

In order to promote a professional image and to comply with safety, infection control, and patient comfort standards, the phlebotomy team will maintain a well-groomed appearance.

A neat professional appearance communicates competence and quality service to guests and internal customers. Consistent appearance within the phlebotomy team also facilitates familiarity for patients and their family and friends.

**Dress Standard**

1. Clothing
   1. The phlebotomist’s appearance must neat and clean.
   2. The standard lab uniform is Carribean Blue scrubs
   3. Black or white tee shirts may be worn under scrubs, with no visible logos.
2. Shoes

In order to comply with safety regulations, shoes must be constructed of solid, non-canvas material covering the majority of the foot. Woven fabric shoes, sandals, opened-toe, or any shoes that expose any part of the foot may not be worn on the job.

1. Accessories
   1. **Identification badges must be worn properly displayed in a visible manner,** at shoulder or collar height. Failure to display photo identification badges on the upper front torso will result in being relieved of duties for the day. The badge is required for identification, as well as access to many restricted areas.
   2. Hairstyles, jewelry, and other clothing that may present as a safety hazard or impede work should be avoided.
2. Enforcement
   1. The Section Manager will counsel inappropriately dressed individuals on their first offense.
   2. The second offense will result in a verbal advisory.
   3. The third offense will result in a written advisory.
   4. In the event that an employee is sent home to change clothes they will not be allowed to make up time.
   5. Violations will be reflected in the annual review.

**Policy Notes**

1. Tee shirts and other clothing should be free of boldly displayed logos or advertisements.
2. If employees feel that their dress has been inappropriately challenged then they may ask for a review by the Associate Administrative Director or the Administrative Director.
3. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: N/A**
2. **Reference: N/A**
3. **Attachments: N/A**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Proper Phlebotomy Procedures and Identification of Patients**  **IPP#4** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**  To give guidelines to staff concerning the proper identification of patients
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure: IT IS ABSOLUTELY ESSENTIAL THAT THE SAMPLE IS COLLECTED ON THE RIGHT PERSON**
2. **INPATIENTS:**
   1. The Inpatient Phlebotomy department uses the Epic Rover bedside barcode scanner and printer system for positive patient identification on inpatients. In the event that the system is down or otherwise unavailable, the name and medical record number on requisitions when applicable, labels, and I.D. bracelet must be a 3 way match. In the event a patient is not wearing a bracelet or there is a discrepancy, report the difference to the charge nurse. Proceed only when corrections have been made. Before checking the armband, it is important for phlebotomists to introduce themselves and explain what they are doing. At that point, ask the patient to state their name and date of birth. When dealing with nonresponsive patients get a verbal confirmation that the name and the date of birth that is on the armband is correct from family members or the nurse. All samples are tracked to the Phlebotomist who collected the sample either electronically through the Rover device or by the name being signed on the requisitions.
   2. **All staff are expected to identify the patient in accordance with the PATIENT IDENTIFICATION** 
      1. **Policy for Wake Forest Baptist Medical Center main campus. This policy is found on the intranet under the Laboratory Handbook and as an attachment.**
   3. Verification of patient identity should occur at the time of collection.
   4. There are two different methods of identifying blood and body fluid specimens
      1. Computer, LIS generated bar-coded label
      2. Hand written label
   5. Specimen labeling **must** be done in front of the patient, at the time of collection.
   6. **Never** pre-label a tube or specimen before you collect the specimen.
   7. Blood Bank Identification procedures may be found in the blood bank policy and procedure manua**l.**
   8. Minimum information required on requisitions:
      1. Name
      2. Medical Record Number
      3. Date of Birth
      4. Location
      5. Account number
      6. Name of the physician who is to receive the results
      7. Tests or assays requested
      8. Date and time of specimen collection
   9. After the samples are collected, the tubes are labeled with the patient's name and medical record number at the bedside.
   10. Placement of bar-coded Labels on the Tubes
       1. The bar-coded labels that are generated from the LIS must be placed on the tubes with a specific orientation.
       2. The first letter of the last name is oriented toward the top of the tube.
       3. Note the placement of the label. The barcode is positioned next to the cap and is in line with the tube. This alignment is critical for instruments to read the bar code in the laboratory.
   11. Hand-written label placement: Place the label on the specimen in a way such that the written information is not obscured.
   12. Transporting Specimens back to the Laboratory
       1. Samples should be delivered to the laboratory ASAP.
       2. All samples being delivered to the laboratory should be in a biohazard bag.
       3. Multiple patient samples may be placed in the same biohazard bag if:
          1. All tubes have a barcoded, Beaker generated label on it
          2. There are no requisitions to go with the specimens
       4. Specimens that are hand-labeled or have a requisition require their own biohazard bag and may not be mixed with other patient specimens.
       5. Samples may be delivered by courier, walking the sample to the lab, or by the pneumatic tube system.
       6. Blood collection tubes are maintained at room temperature unless otherwise instructed.
   13. Receiving the Specimen in the Laboratory
       1. Specimens are received into the laboratory using the “receive” function in the Beaker LIS system.
       2. In the event of duplicate requests, the phlebotomists/ lab tech may credit the duplicate only if ordered for the same patient on identical dates and times.
       3. Acceptable credit /cancellation codes are pre-defined in the beaker/ Wake One LIS.
   14. NO SPECIMENS should be collected by laboratory personnel until the requesting physician or nurse has made the proper requisition/electronic orders available. In the event of an oral request for testing and collection by the laboratory, a requisition will be obtained or an electronic order will be placed in Wake One before the Phlebotomist leaves the floor.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures:** 
   1. Grievance Policy as found under Human Resources on the Infinet.
   2. Inpatient Phlebotomy Sample Labeling Error IPP#5; Blood Bank Identification Policy
2. **References: GEN.40490, GEN.40491, COM.06100, COM.06000, GEN.40938; Pathology Patient Identification**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Specimen Identification Error Procedure**  **IPP#5** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **3/7/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

**1**) **General Procedure Statement:**  To give guidelines to staff concerning the policy of proper sample labeling.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Scope:** 
     1. Procedure owner/Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who performs procedure: Inpatient Phlebotomy staff

**2) Procedure:** Sample Labeling Errors

It is the policy of the Inpatient Phlebotomy Department that patient specimens must be accurately identified and labeled in order for the laboratory to generate valid and appropriate results. Laboratory employees who collect and handle specimens are responsible for labeling them correctly as defined by section policy and procedure. The Inpatient Phlebotomy Department uses the Epic/Beaker Rover Positive Patient ID system which allows for positive patient identification with all inpatient draws. Failure to use the system may result in improperly labeled specimens which is a serious performance problem requiring immediate attention and response.

1. Mislabeled specimens or labeling errors are reported to the Manager or Inpatient Phlebotomy Shift Coordinator.
2. If results have been reported, a corrected report is sent per the specific lab section procedure.
3. The Manager/Coordinator will follow up and document any adverse effects on patient care and determine if remediation is necessary. Outcomes of the investigation will be discussed with the employee(s) involved.
4. In the unlikely event that the electronic devices are not available, any samples that need to be collected without the device must be pre-approved by the Manager or the shift Coordinator.
5. Requests for relabeling of samples must be approved by the Pathologist on call, and are typically limited to non-retrievable samples and not blood.
6. The act of the Employee signing off on this procedure demonstrates acknowledgement of the severity of and expectations with patient identification errors.

**3) Remediation**

1. The purpose of remediation is to ensure that quality patient results are obtained by communicating to employees involved in a mislabeling/misidentification event the potential patient care consequences of the occurrence and to determine if there is a need for retraining. Mislabeling or misidentification of patient specimens can potentially result in delayed turnaround times and/or incorrect/inaccurate laboratory results being generated. It is recognized that all mislabeled samples/misidentifications have the potential to adversely affect patient care, however failure to use the Positive Patient ID system is a serious offense since the system is in place to avoid misidentification.
2. Classification of Mislabeling or Misidentification:
3. Level **One**-samples that have been collected on inpatients without the proper use of the Positive Patient Identification device with no adverse outcome because the identification is correct or the wrong BBID number is used.
4. Level **Two**-samples that have been collected on the wrong patient because the Collection Manager device was not used properly.
5. Remediation Triggers:
6. The first occurrence of a Level One misidentification/mislabel may result in a written advisory.
7. The first occurrence of a Level Two and the second occurrence of a Level One misidentification/mislabel may result in a written final written advisory.
8. Any subsequent occurrence of a Level One or Level Two misidentification, within 12 months of a previous occurrence, may result in discharge.

**4) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures:** 
   1. Grievance Policy as found under the Faculty policies on the WFUBMC website

**6)References: GEN.40492, Medical Center Specimen Identification, Pathology Specimen Relabeling**

**7)Attachments:** **N/A**

**8)Revised/Reviewed Dates and Signatures:**

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|  | **HIPAA Rules for Information Sharing**  **IPP#6** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

**1**) **General Procedure Statement:**  To give guidelines to staff concerning the proper protocols for sharing patient information

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Scope:** 
     1. Procedure owner/Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who performs procedure: Inpatient Phlebotomy staff

**2) Procedure:** The laboratory adheres to HIPAA (Health Information Portability and Accountability Act) as interpreted by the Medical Center statements of policy. All employees will make necessary precautions to protect patient’s medical, billing, and demographic information. Such precautions include using shred bins when discarding patient documents or computer disks and only discussing or inquiring about patient’s information when necessary for the job. All employees will verify the identity of individuals inquiring about patient information as well as determining the purpose of the inquiry.

Every employee works to assure that individual’s Protected Health Information (PHI) is only shared with people immediately involved in the care decisions or billing for that care.

**3) Key Terms:**

* 1. **Use:** Sharing of PHI within or among the Medical Center departments
  2. **Disclosure:** Sharing of PHI outside of the Medical Center.
  3. **Incidental Disclosure:** Information that can be seen on log sheets, sign-in rosters, waiting rooms, and non-specific telephone conversations.

1. **Policy Notes:**
   1. When concerned about a privacy issue, any employee may call 713-HIPA(4472).
   2. When concerned about the security of computers, telephones or other electronic information systems, any employee may call 716-5401
   3. Employees may also call the Medical Center’s Compliance Hotline at 1-877-880-7888.
   4. If you see violations of privacy or security policies, you must immediately report them to you supervisor or one of the above numbers.
2. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: IPP#8**
2. **References: GEN.41303**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Medical Center Specimen Transport Guidelines**  **IPP#7** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**  To give guidelines to staff concerning the proper transportation of specimens.
   1. **Purpose:**This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure:** Phlebotomists must provide the safest and most professional environment for our patients and guests therefore phlebotomists will adhere to guidelines which are monitored by OSHA for specimen delivery to the lab.
   1. Specimens delivered to the laboratory via the pneumatic tube system are sealed in plastic biohazard bags. Stat samples will be sealed in plastic biohazard bags that are designated as STAT bags. The pneumatic carriers for transportation of biological samples, such as blood, are red and must include absorbent cushions for padding.
   2. Specimens requiring delivery during pneumatic tube system down times are delivered by hand by the Phlebotomist to Central Processing.
   3. Specimens requiring special handling as warming or cooling materials will be delivered promptly via either the pneumatic tube system or hand delivered. Warm water or ice slush may be used as appropriate. Notify Central Processing that samples have been sent or delivered.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: Specimen Transportation Policy Lab Admin 16**
2. **References: GEN.40515**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
|  | 2/21/2019 | Revised signature page | Laurie Watson, MT, ASCP |
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|  | **Phlebotomy Training**  **IPP#8** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **6/1/2015** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**  To give guidelines to staff concerning the proper process for training new employees.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure: Phlebotomy training**

In order to assure that each employee is capable of performing standard procedures and practices specific for Inpatient Phlebotomy, structured training protocols will be used to guide the employee through the orientation process. Upon completion of training, Competency will be accessed by written exam and through performance observations designed to demonstrate employee's ability to locate information, demonstrate safety practices, patient focus, decision making skills, and to conduct their routine daily activities.

a. Training categories

i. Safety, patient and employee

ii. Basic departmental and Organizational orientation

ii. Required Online training

iii. Computer systems

iv. Age specific and special needs training

1. Adults
2. Pediatrics
3. Geriatrics
4. Oncology
5. Behavioral Health
6. Renal Populations

v. Infection Control

vi. Patient Interactions

vii. Patient Adverse Reactions

vii. Phlebotomy procedures

ix. Documentation

x. Specimen Transport

xi. Patient Privacy

b. Checklists will be signed off upon completion of each category

c. Checklists will be held by the Coordinator to assure availability by trainers in all areas.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures:** 
   1. **Competency Assessment IPP#12**
   2. **Adverse Patient Reactions IPP#19**
   3. **HIPPA IPP#6**
2. **References: GEN.40515, GEN.55450**
3. **Attachments:** **Training checklist**
4. **Revised/Reviewed Dates and Signatures:**

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| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
|  | 3/5/2019 | Revised signature page | Laurie Watson, MT(ASCP) |
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|  | **Blood Collection Procedures**  **IPP#9** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Blood Collection.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who Performs procedure: Inpatient Phlebotomy

**Procedure: Blood collection Procedure**

**Venipuncture Procedure**

The collection of a properly identified and skillfully collected blood sample is an essential step for quality lab results.

The proper use of personal protective clothing /equipment should be used for all patients as indicated. Standard Universal Precautions are followed for all patients, including glove usage and proper hand hygiene.

**PROCEDURE OVERVIEW:**

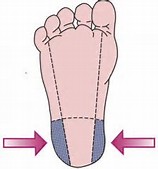
* 1. Phlebotomists, Medical Technologists, Medical Lab technicians or nursing staff can obtain blood samples by peripheral venipuncture or skin puncture. Arterial punctures and other methods of collections are not performed by these staff members.
  2. Any difficulties encountered obtaining blood specimens should be directed to the provider.
  3. Hand hygiene shall be performed and examination gloves worn for collection of body fluid and blood. Identification of the patient shall be per the Patient Identification policy. Hand hygiene shall also be performed following the collection.
  4. Blood samples will be labeled immediately following collection, at the patient’s bedside, with two approved patient identifiers (Patient name and DOB, or MRN).
     1. NOTE: Room number is not an approved patient identifier and can lead to a BAD ID and rejection of the sample. The person collecting the specimen should be the one to ID the patient and label the specimens.
  5. The laboratory will use clinically effective needle devices that incorporate engineering controls to prevent needle stick injuries. Needles may not be manipulated by bending or recapping.

1. Procedure
   1. **Wash hands before placing gloves on hands.**
   2. Prepare requisitions when appropriate, and specimen labels**.** 
      1. Each request for a blood specimen must be verified to identify all supplies associated with the patient.
      2. Identify the patient by scanning the armband and confirming the name and date of birth visually and verbally.
      3. In the absence of the scanner, a three-way match should be made using the test requisition and the specimen labels by comparison of what the patient verbally states.
   3. Assemble Supplies**.** 
      1. Only latex free supplies are used.
      2. Collection tubes
      3. Latex free Tourniquet
      4. 70% alcohol gauze
      5. Dry gauze pads
      6. Latex Free Exam gloves
      7. Adhesive bandage or medical tape
   4. Select the system for venipuncture:
      1. Evacuated System
      2. The single use tube holder
      3. Evacuated tubes
      4. Single use syringes
      5. Single use needles
   5. Reassure the patient**.** 
      1. The phlebotomist gains the patient’s confidence and assures the patient that although the venipuncture will be slightly uncomfortable, it will be short in duration.
      2. Never tell a patient that the venipuncture will not hurt.
   6. Prepare the patient**.** 
      1. The arm should be straight, firmly supported and rotated to expose the antecubital area.
   7. Apply new tourniquet**.** 
      1. Apply tourniquet 2-6 inches above the desired insertion site to impede venous, but not arterial, blood flow.
      2. The tourniquet should be tight enough to restrict blood flow but not make the patient unnecessarily uncomfortable.
      3. Ask the patient to close their hand but not to pump their fist**.**
   8. Select a site**.**
      1. If a peripheral IV is in the same arm, turn IV fluids off for at least 2 minutes prior to venipuncture.
      2. Whenever possible, **avoid** venipuncture above an IV site.
      3. The larger and fuller medial cubital and cephalic veins are used most frequently used.
      4. Veins in the hand or back of the wrist may also be used.
      5. The use of the basilic vein should be the last option.
      6. Veins on the palm side of the wrist should not be used.
   9. Clean the venipuncture site**.** 
      1. Clean with 70% alcohol in a circular motion from center to periphery.
      2. Allow to air dry for 30 seconds. Failure to allow alcohol to dry properly could lead to hemolyzed specimens and increased discomfort for the patient during the collection.
   10. Perform venipuncture.
       1. Evacuated tube method
          1. Thread the needle into the tube holder and remove cap
          2. Grasp patient’s arm and position thumb 2 inches below insertion site. Apply traction on skin in direction of hand.
          3. Insert needle with bevel up through skin at a 15 – 30˚ degree angle. Use a continuous smooth motion.
          4. Ask patient to open their hand.
          5. Continue to hold the tube holder with one hand while inserting and changing the evacuated tubes according to the correct order of draw.
          6. Allow tube to fill until the vacuum no longer draws blood from the vein.
          7. Remove tourniquet following blood fill of the first tube. To avoid hemoconcentration, the maximum time the tourniquet should be tied around the patient’s arm is @ 1 minute.
          8. Mix additive tube by gently inverting them 5 to 10 times.
          9. When final tube is collected, place a piece of gauze over collection site and withdraw needle. Lock the safety shield over the needle and discard into biohazard sharps container.
          10. Hold gauze over the wound site for 2-4 minutes. Check to ensure bleeding has stopped and apply clean gauze and apply dressing.
              1. NOTE: BANDAIDS are not an approved dressing for children under 2 years of age.
          11. Label all tubes immediately in the presence of the patient.
          12. Place specimens in biohazard bag.
       2. Syringe Method
          1. Attach the needle to the syringe and exercise the plunger.
          2. Grasp patient’s arm and position thumb 2 inches below insertion site. Apply traction on skin in direction of hand.
          3. Insert needle with bevel up through skin at a 15 – 30˚ degree angle. Use a continuous smooth motion.
          4. Gently pull the plunger back to fill the syringe. Do not force plunger back. When properly performed, the plunger should be easy to pull back.
          5. Ask the patient to open hand
          6. Release the tourniquet.
          7. Place gauze on the venipuncture site**.**
          8. Remove the needle.
          9. Apply gentle pressure to the gauze as the needle exits the point of entry.
          10. Activate the protective sheath on the needle
          11. Discard the needle and holder in an appropriate sharps container**.**
          12. Maintain pressure on the puncture site until bleeding stops (2-4 minutes)
          13. Bandage the site.
              1. NOTE: BANDAIDS are not an approved dressing for children under 2 years of age.
          14. Transfer blood from syringe to appropriate colored evacuation tubes using a vacutainer blood transfer device only. Place evacuated tubes into vacutainer blood transfer device holder according to the recommended order of draw for syringe collections.
          15. Label the tubes in the presence of the patient.
          16. Deliver samples to the lab in a biohazard bag.
       3. Vacutainer Safety Push Button Blood Collection Set (Butterfly Blood Collection Set)
          1. Peel apart the package and remove set.
          2. Screw the luer adapter into the holder.
          3. Grasp patient’s arm and position thumb 2 inches below insertion site. Apply traction on skin in direction of hand.
          4. Grasp butterfly wings with thumb and fingers. Insert needle with bevel up through skin at a 15 – 30˚ degree angle. Use a continuous smooth motion.
          5. Ask patient to open their hand.
          6. Continue to hold the tube holder with one hand while inserting and changing the evacuated tubes according to the correct order of draw.
             1. NOTE: When using a winged blood collection set for venipuncture and a coagulation (citrate) tube is the first specimen tube to be drawn, a discard tube should be drawn first. The discard tube must be used to fill the blood collection set tubing’s “dead space” with blood but the

discard tube does not need to be completely filled. This important step will ensure proper blood-to-additive ratio. The discard tube should be a non-additive or coagulation tube.

* + - 1. Allow tube to fill until the vacuum no longer draws blood from the vein.
      2. Remove tourniquet following blood fill of the first tube. To avoid hemoconcentration, the maximum time the tourniquet should be tied around the patient’s arm is @ 1 minute.
      3. Mix additive tubes by gently inverting them 5 to 10 times.
      4. When final tube is collected, place a piece of gauze over collection site. Activate the safety shield button. The needle will automatically retract inside the holder.
      5. Discard needle in biohazard sharps container.
      6. Hold gauze over the wound site for 2-4 minutes. Check to ensure bleeding has stopped and apply clean gauze and apply dressing.
         1. NOTE: BANDAIDS are not an approved dressing for children under 2 years of age.
      7. Label all tubes immediately in the presence of the patient.
      8. Place specimens in biohazard bag.
    1. Safety Push Button Blood Collection Set (Butterfly Blood Collection Set) with syringe
       1. Remove the clear luer adapter tip from the blood collection set and attach a syringe.
       2. Follow all steps above for Vacutainer Safety-Lok Blood Collection Set (Butterfly Blood Collection Set) above.
       3. Transfer blood from syringe to appropriate colored evacuation tubes using a vacutainer blood transfer device only. Place evacuated tubes into vacutainer blood transfer device holder according to the recommended order of draw.
       4. Label all tubes immediately in the presence of the patient.

1. Skin Puncture Collection Methods
   1. Fingerstick
      1. Fingerstick is an acceptable method for children over 6 months of age.
      2. A venipuncture is the method of choice for collections.
      3. If a fingerstick is being substituted in lieu of a venipuncture, documentation of physician notification should occur. Due to the nature of the puncture, some tests may be affected by a fingerstick method; therefore, physicians should be notified.
      4. Choose a finger that is not cold, cyanotic, or swollen.
         1. If possible, the puncture should be at the tip of the fourth finger of the nondominant hand.
      5. Gently massage the finger five or six times from base to tip to aid blood flow.
      6. With an alcohol swab, cleanse the ball of the finger. Allow to air dry.
      7. Remove the protective covering from the top of the lancet.
      8. Hold the patient's finger firmly with one hand and activate the puncture button on the lancet. Choose a puncture site halfway between the center of the ball of the finger and its side.
      9. The cut should be made in a vertical line with the finger to produce a large, round drop of blood.
      10. Wipe the first drop of blood away with clean gauze (not for PT tests).
      11. Gently squeeze the finger from base to tip to obtain the proper amount of blood for the tests requested.
      12. At completion of specimen collection, apply pressure to the puncture site using dry gauze.
          1. NOTE: BANDAIDS are not an approved dressing for children under 2 years of age.
      13. Place cap on microtainer and mix each additive tube by inversion 8-10 times immediately after collection.
      14. Place the beaker label around the top of the tube, being careful not to obscure the name and MR#
   2. HEEL PUNCTURE**:** 
      1. Heel puncture should only be performed on infants less than 6 months of age.
      2. Heel puncture should be reserved for only infants requiring a bilirubin test or at the direction of the physician. If venipuncture is not an option, documentation should be made the physician was notified a heel puncture is being performed. Due to the nature of the puncture, some tests may be affected by a heel stick method, therefore, physicians should be notified.
      3. Assemble necessary equipment (see above for finger puncture) and have within easy reach.
      4. Identify the patient by comparing the requisition, labels and the stated name and date of birth.
      5. Firmly grasp the foot, exposing the heel with one hand, use the lancet to make a puncture with the other hand.
      6. Wipe away the first drop of blood with dry gauze.
      7. Gently massage the heel to obtain the desired blood flow and fill the containers to the proper levels.
         1. Use only gentle massage when obtaining blood.
         2. Excessive massaging dilutes the blood with tissue fluids and may also cause hemolysis.
         3. It is sufficient to massage with your thumb and forefinger.
      8. At completion of specimen collection, apply pressure to the puncture site using dry gauze. A Band-Aid is not to be used on infants.
      9. Place cap on microtainer and mix each additive tube by gentle inversion 8- 10 times immediately after collection.
      10. Label tubes as with finger sticks.
      11. **Do not use a heel that is excessively bruised**. Have a doctor make the judgment when you are unsure about the condition of a foot.
   3. RECOMMENDATIONS FOR HEEL PUNCTURES
      1. Perform punctures on the most medial or most lateral portion of the plantar surface.
      2. Puncture no deeper than 2.4 mm.
      3. Do not perform punctures on the posterior curvature of the heel.
      4. Do not puncture through previous sites which may be infected.
      5. Do not use a heel that is receiving IV fluids or is excessively bruised. Have a doctor make the judgment when you are unsure about the condition of a foot.



1. Processing of tubes
   1. Most tubes contain an additive or clot activator that needs to be mixed with the blood sample.
   2. Tubes with anticoagulants such as EDTA need to be mixed to ensure the specimen does not clot
   3. Immediately after drawing, hold the tube upright and gently invert 180˚ and back.
   4. Repeat movement as prescribed for each tube.
   5. Failure to mix tubes properly could lead to clotting of the tube, failure of SST tubes to clot completely and repeat of the specimen collection.
   6. Once tubes have been collected, labeled, and appropriately mixed, place in biohazard bag and deliver to the laboratory.
2. Procedure Notes
   1. All needles are disposed in biohazard sharps containers.
   2. The safety devices on these needles are designed to reduce the likelihood of needle injury but accidents may still happen. Report all needle injuries to the supervisor immediately, as well as overfilled sharps containers.
   3. Phlebotomists should be aware of any discomfort of the patient. If a patient faints, seizes or is otherwise injured call 6-9111 and report the Code 44. Remain with the patient until assistance arrives
   4. Patient nourishment is provided in cases where the patient feels ill or nourishment is needed.
3. The order of draw is the same for syringe or vacutainer.
   1. If only a blue top tube is required, then it may be the only tube obtained, unless using a butterfly. In the event a tubed butterfly unit is used to collect a sample, a discard tube must be used to capture the air in the tubing.
   2. The SST Gel tube is an additive tube and should be drawn after the blue.
   3. Specimen requirements are specific for the tube type as required by the testing department.
   4. See Order of Draw Procedure
   5. Placement of bar-coded Labels on the Tubes
      1. The bar-coded labels that are generated from the LIS must be placed on the tubes with a specific orientation.
      2. The first letter of the last name is oriented toward the top of the tube.
      3. Note the placement of the label. The barcode is positioned next to the cap and is in line with the tube. This alignment is critical for instruments to read the bar code in the laboratory.
   6. Hand-written label placement: Place the label on the specimen in a way such that the written information is not obscured.
4. Transporting Specimens back to the Laboratory
   * 1. Samples should be delivered to the laboratory ASAP.
     2. All samples being delivered to the laboratory should be in a biohazard bag.
     3. Multiple patient samples may be placed in the same biohazard bag if:
        1. All tubes have a barcoded, Beaker generated label on it
        2. There are no requisitions to go with the specimens
     4. Specimens that are hand-labeled or have a requisition require their own biohazard bag and may not be mixed with other patient specimens.
     5. Samples may be delivered by courier, walking the sample to the lab, or by tube system.
     6. Blood collection tubes are maintained at room temperature unless otherwise instructed.
   1. Receiving the Specimen in the Laboratory
      1. Specimens are received into the laboratory using the “receive” function in the Mobile Electronic collection device or the LIS system.
      2. In the event of duplicate requests, the phlebotomists/ lab tech may credit the duplicate only if ordered for the same patient on identical dates and times.
      3. Acceptable credit /cancellation codes are pre-defined in the beaker/ Wake One LIS.
5. Pediatric Blood Collection Considerations
   1. The collection of blood specimens from children poses special challenges related to both size and specimen requirements.
   2. Venipuncture is the method of choice for all ages. It should be the first attempt at blood collection.
   3. Heel sticks and finger sticks are performed at the physician's request for any test with a suitable micro methodology. To verify micro volume requirements and availability the phlebotomist can confirm methods with the testing lab:
      1. Hematology 716-2610
      2. Chemistry 716-2610
      3. Microbiology 716-2658
      4. Referral Testing 716-2610
      5. Blood Bank 716-2618
   4. Heel sticks may be attempted up to but not beyond age 6 months. After 6 months an infant's heel becomes too thick for adequate blood collection.
   5. Fingerstick may be performed on any patient older than 6 months of age, if appropriate.

**Order of Draw and Tube Types**

The proper order of draw is followed when drawing all patient samples

The order of draw is as follows:

1. Tubes for sterile samples (i.e. Blood Cultures)
2. Tubes for coagulation studies
3. Tubes without additives
4. Tubes with additives
   1. SST Gel
   2. Heparin
   3. EDTA/Pink and Purple
   4. Oxalate/Fluoride
   5. Others as needed

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| **Tube Top Color** | **Size** | **Additive** |
| BD Bactec Aerobic and Anaerobic | 10 ml | Blood Culture Media |
| Blue | 2.7 ml, 1.8ml | Sodium Citrate (anticoagulant) 0.3ml-0.109M |
| Red | 10 ml | None |
| Gold | 3.5 ml | Inert gel barrier and clot activator |
| Green | 5 ml | Li Heparin (anticoagulant) 75 USP Units |
| Lavender | 3 ml  500ul | K2EDTA (anticoagulant) 5.4 mg  K2EDTA (anticoagulant) 1.0 mg |
| Pink | 6 ml | K2EDTA (anticoagulant) 10.8 mg |
| Yellow | 10 ml, 1.5 ml | ACD (anticoagulant) |
| Royal Blue | 6 ml | K2EDTA (anticoagulant) 10.8 mg, lavender stripe  Serum red stripe |
| Gray | 4 ml | Sodium Fluoride 10mg, Potassium Oxalate 8 mg (anticoagulant) |

Ref: NCCLS Document H3-A4 Vol.18 No. 7

* 1. **Special Collection and Tube Considerations**
     + 1. Some specimens require special handling once collected.
       2. Follow guidelines according to the specific test you are collecting.
       3. Call main campus customer service center (716-2610) for additional information if not found in the online test catalog or Beaker.
     1. **Light Sensitive Specimens**
        1. Specimens that are light sensitive require special handling.
        2. Transport these specimens in a foil or other light protecting wrapping.
        3. Examples of light sensitive specimens
           1. Bilirubin
           2. Erythrocyte protoporphyrin
           3. Carotene
           4. Some Vitamin Tests
     2. **Blood Alcohol Specimens** 
        + 1. Use an alternate cleansing solution such as betadine or soap and water.
          2. Do not use alcohol or Chlorhexidine Preps.
     3. **Chilled Specimens**
        1. Certain analytes must be preserved prior to analysis by keeping the specimen chilled.
        2. To ensure accurate results of such specimens, fill a biohazard bag with an ice slurry.
        3. Do not put specimen directly into the ice slurry.
        4. Place specimen in the outer pouch of the biohazard bag.
        5. Examples of analytes requiring chilled specimen transport:
           1. ACTH
           2. Acetone
           3. Ammonia
           4. Ionized Calcium
     4. **Keep warm**
        1. Cryoglobulins require a red top tube and send immediately to the lab. It is best to transport them in a warm hand or a heal warming device if possible.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: IPP#4, IPP#1, IPP#9**
2. **References: GEN.74250**
3. **Attachments:** **Minimum Pediatric Blood volumes**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Blood Collection Adverse Reactions.**  **IPP#10** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **3/5/2017** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**  To give guidelines to staff concerning the proper process for handling adverse patient reactions during blood collection
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure: Phlebotomy training for Adverse Reactions**
2. Adverse reactions from blood collection can occur and personnel collecting blood specimens must know what can occur and how best to manage the reactions. This policy addresses some adverse reactions and what should be done to address these reactions and not compromise a patient’s health.
3. Designation of personnel for first response to an adverse patient phlebotomy is area specific.
4. Inpatient Phlebotomy – On nursing units, nursing staff or physicians would be designated first response personnel.
5. Outpatient Phlebotomy – Within Doctors’ offices and outpatient treatment centers, nursing staff or a code 44/rapid response would be designated first response personnel. 911 should be called if further assistance is needed.
6. Outreach Phlebotomy – Lab draw locations outside of a doctors’ office. Nursing staff or physicians would be designated first response personnel from adjacent offices. 911 should be called if further assistance is needed.

**Adverse**

**Reaction**

1. Hematoma: Blood can leak out of a vein and under the skin during venipuncture. This can cause discomfort and pain and can complicate further collections from that site. As soon as a hematoma is noted, remove the needle and tourniquet and apply pressure at the site for a minimum of 3 minutes. Check the site and if the hematoma has stopped forming, put on a bandage or gauze with tape and inform the patient of the hematoma. The bandage should remain in place for a minimum of a half hour.
2. Arterial Puncture: If the blood pulses into the collection system or fills collection tubes rapidly and is bright red, an artery has been punctured. Immediately discontinue blood draw and then apply pressure for a minimum of 5 minutes. Check the site before applying a bandage to ensure the artery has sealed and notify the patient that the site needs to have a bandage on it for an hour and not to use the arm for lifting anything over 5 pounds for the day. Let the patient know there may be more discomfort at the site than if the draw was a venipuncture draw.
3. Pain: Since nerves are very close to veins and arteries, there is some risk a nerve maybe pierced by a needle during blood collection. The patient will complain that he/she feels an electric shock going up his/her arm. Immediately remove the needle from the patient’s arm and put pressure on the site. Ask the patient if the sensation has stopped. If so, try to redraw at another site if the patient is willing. Explain to the patient that a nerve was touched by the needle and that was what he/she felt. Ask them to let us know if they have any more numbness, weakness, or shocking sensations at the first site. See Nerve Damage.
4. Nerve Damage: If a nerve has been pierced or cut, the patient will feel pain or numbness or a shocking sensation as discussed in (d.) If the patient continues to have these symptoms, get the patient to the ED (Emergency Department) and ask the staff there to examine the patient for nerve damage. The patient may need to be seen by his or her doctor to follow-up. Comfort the patient and let them know we cannot feel for nerves and this is a rare out-come of venipuncture.
5. Nausea: Patients may present with nausea unrelated to any blood collection procedure. Ask the patient how they are feeling and ask the patient if they would (if could) delay the blood collection until they feel better. If the collection must take place, make the patient as comfortable as possible. Instruct the patient to breathe deeply and slowly. Apply cold compresses to the patients’ forehead. Be prepared to call the designated first response personnel, if needed.
6. Vomiting: Patients who may vomit should be given an emesis basin or some other acceptable container and have tissue ready. Give the patient a cup of water to rinse out his/her mouth. Notify the designated first response personnel.
7. Syncope (Fainting): If the patient passes out during the procedure, immediately release the tourniquet, remove the needle, activate the safety feature, and discard the device. Having the presence of mind to protect yourself from the contaminated sharp can prevent an adverse reaction from escalating into an accidental needlestick. Apply pressure to the site and summon first-aid personnel without leaving the patient’s side. If possible, provide physical support to the patient and lower the patient’s head and arms to promote blood flow to the brain. Avoid the use of ammonia inhalants, as they may trigger respiratory distress in asthmatic patients.

**Limitations of**

**The Procedure**

Always work with doctors and nursing staff who are directly caring for our patients if there are any adverse reactions or risk of over phlebotomizing a patient. This guide does not encompass all possible reactions and use caution if there are any unusual outcomes or reactions during blood collection or after.

**References**

1. Alan Greene MD FAAP, June 25, 2003,

http://www.drgreene.org/body.cfm?id=21&action=detail&ref=

1616

2. http://www.skillsforhealth.org.uk/viewcomp.php?id=1561,

March 2007.

3. Diversity of Life. California: Wadsworth, 1989: 398.

4. "Blood." World Book Encyclopedia. Chicago: World Book,

1998: 407.

5. From The Harriet Lane Handbook, adapted from "Hematology

of Infancy and Childhood" by D Nathan and FA Oski.

6. www.emedicinehealth.com/phlebitis/article\_em.htm, March

2007.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures:**
   1. **Phlebotomy Training IPP#8**
   2. **Blood Collection Procedures IPP#9**
   3. **Routine Inpatient Phlebotomy Collection with the mobile electronic collection Device IPP#11**
2. **References: GEN.40501**
3. **Attachments:** **Training checklist**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Routine Inpatient Phlebotomy Collection**  **Using the Mobile Positive Patient ID Collection Device**  **IPP#11** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning Routine Inpatient Phlebotomy Collection.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Routine Inpatient Phlebotomy Collection**

The phlebotomists perform venipunctures for blood collection in patient rooms at regular intervals throughout the day. The patient’s lab orders are entered in the Wake One/Epic Computer System by Provider. If the work is ordered for the lab to collect prior to the assigned round time then the request will appear on the Rover device.

**PROCEDURE:**

## Obtain orders through the Mobile Electronic device stepwise:

1. Logging into the Device:
2. Press the home key.
3. Enter Username and Password.
4. Tap “Beaker Inpatient Lab Draws”
5. Tap “WC” (Winston Campus) Lab Draws

**B. Selecting and collecting lab**

1. Tap on unit you are assigned to.
2. Tap on patient for collection.
3. On the information screen, check for the tube types, FYI’s and allergy alerts.
4. Tap the middle icon at the bottom of the screen to access orders.
5. Place the Rover device in a clear bag.
6. Gather supplies together in one place on the cart/basket.
7. Wash hands.
8. Pick up the Rover device and supplies and enter room.
9. Scan the patient’s bracelet and verify the patient’s name and date of birth.
10. After scanning and verifying the bracelet, leave the supplies and the Rover in the patient’s room in the bag.
11. Go to the doorway and get the labels off the printer on the cart.
12. Wash hands before taking the label off of the printer.
13. Return to the room to collect the sample, label the blood at the bedside and scan the labels to verify Positive Patient ID.
14. Place the bloods in a biohazard bag on the cart, and let the Rover slide out of the bag onto the cart.
15. Remove gloves and discard them and the Rover bag in the patient’s room. Wash hands before touching anything on the cart or the basket.
16. Hand Hygiene for Isolation Rooms:
    1. Gowns and masks do not need to be removed when returning to the cart to retrieve labels as long as the threshold at the door is not crossed.
    2. After collection, remove gown/gloves/mask and discard in the room along with the Rover bag.
    3. If the isolation is enteric, hands must be washed with soap and water when leaving the room for the last time. Hand sanitizer is acceptable for all other isolations.
17. Tap (back) top left corner to go back to the patient list.

**C. Assigned to me function**

1. Tap on the floor assigned to you.
2. Select patient by tapping on the circle to the left of the patient’s name. The circle will turn green with a check mark in it.
3. Tap <WC Lab Draws at the top left corner of the screen.
4. Tap on “Assigned to Me” and you will then see the patients you are to collect.
5. Continue this process for additional patients.

**D. Defer Draws:**

1. If you have not scanned the bracelet, in the information screen tap on the defer draw and select a reason for the defer.
2. If you have scanned the bracelet, go to the Order Inquiry screen and tap select at the top of the screen. You will t hen tap on the test you want to defer. At this point, you will see a green check mark in the circle beside the test to defer. At the bottom of the screen, choose redraw and a screen will pop up where you can select the reason for redraw. Go back to the information screen and defer the test by tapping on “defer” and choosing a reason for the defer.

**E. Crediting orders**

1. After selecting the patient you want to credit, go to the Order Inquiry screen and swipe left on the test that needs to be credited.
2. “Credit” will appear in red. Tap on the credit and select a reason for the credit.
3. Each test needs to be credited individually.

**F. All Units**

1. This function is used to look at all patients with orders on every floor programmed on the device. It can also be used to see which patients coworkers have assigned to them.
2. Tap on All Units to see the patients that have orders for collection.
3. The patient with a check in the gray circle to the left of the patient has been assigned to someone.
4. To see the patients assigned, Hide Taken needs to be at the top right corner of the screen. If the screen indicates “Show Taken”, the assigned patients will not be visible.

#### Determine Nursing Units that have patients who require lab work

After reviewing the patients on the Mobile electronic device, indicate on the call list which floors had patients. Any nursing unit assigned to that round time that does not have a patient on the device should be called. The phlebotomist calls those units to ask if they have any lab requests for that hour. If they answer yes then indicate yes on the call sheet. If they answer no then indicate no on the call sheet. Also indicate, in both cases, who responded.

Nursing units that respond that they have lab work will have Wake One labels and/or requisitions in the designated box on their floor, and they should meet the Phlebotomist complete the collection together as these are Unit to Collect samples and are on the Nursing worklist. The Nurse will need to complete the collection process electronically in Wake One.

#### Making the Rounds

Phlebotomists will report to their assigned nursing units during the regular rounds. Upon reporting to the floor the phlebotomists will sign in to document arrival and check the lab request box for Wake One requisitions and/or Research Slips. This check will be done even when the phlebotomist has patients on the Rover device to be sure that no tests have been added on to the original order.

After checking the box the phlebotomist sets out to the assigned patient’s rooms. After each patient visit, indicate the **time** and the name of the Phlebotomist on each sheet or other requisition if the orders are not on the PDA if applicable. If patients have lab work that should be rescheduled, then have the nurse sign the department form indicating the lab was not successfully collected. If the rescheduled test is on a Wake One or other form of requisition then return that requisition to the nursing station with a signature of notification that tests were rescheduled. Retain the department form for 2 years.

#### Placement of Labels on the Tubes

The barcoded labels that are generated from the Rover device must be placed on the tubes with a specific orientation. The first letter of the last name is oriented toward the top of the tube.

Note the placement of the label. The barcode is positioned closer to the cap and is in line with the tube.



**Transporting Specimens back to the Laboratory**

Samples are delivered to Central Processing every 30 minutes via the pneumatic tube system, or within 1.5 hours of collection if the pneumatic tube system is down and they are hand delivered by the Phlebotomy or Nursing staff. Blood collection tubes are maintained at room temperature unless otherwise instructed by specific specimen requirements.

**Receiving the Specimen in the Laboratory**

Samples are received in the Beaker Lab System upon receipt on the Mobile Electronic device or by Central Processing for orders not collected with the device.

**Procedure Notes**

1. Occasionally after phlebotomists complete a round nursing staff will ask them to draw another patient. If this add-on will not interfere with the timeliness of the other patient samples or will not interfere with reporting to the next assigned task, then phlebotomists may accept the add-on test. If time does not allow for the add-on, then the nursing staff should be informed that the lab will return for that sample on the next round.
2. If the Phlebotomists are anticipating a delay in the arrival to the floor, they will notify the unit of any delays.
3. The Central Processing department enters Wake One requisitions returned from the inpatient floors.
4. In the event of duplicate requests, the phlebotomists will verify that there are other active or completed orders in the LIS and call the nursing unit to confirm the duplicate or that it is a repeat request. The duplicate will not be credited until these 2 steps are completed.
5. In the event that a sample is not obtained by the phlebotomy team, a credit or reschedule code will be placed on the credit/reschedule sheets to document the communication of a failed collection to the nurse. The nurse will initial the paper to document the lack of collection.
6. The Collectors name, time and date of collection are recorded electronically on the mobile device and into the electronic medical record. In the event of a downtime, manual requisitions are used and signed off with the same information by the Phlebotomist at the time of Collection.
7. Scheduled downtimes are typically addressed by collecting routine samples early or before the downtime goes into effect.
8. Unscheduled downtimes require the coordination of Nursing, the Lab, and the Information Technology team. Without the mobile device’s functionality, the Phlebotomist cannot see lab orders and therefore cannot collect samples. When it is determined and communicate that downtime procedures will go into effect, Nursing will use the BCA (Business Continuity device) to retrieve orders and complete manual downtime requisitions. The Phlebotomists will continue to round in their normal manner to collect these samples. Document labels are obtained from the units and placed on the samples, or handwritten can be used if legible. All requisitions need be signed and dated with the time of collection.
9. Acceptable credit and reschedule codes are listed below.

|  |  |
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| BADID | Patient ID incorrect = cancel |
| BROK | Broken/spilled in transit = cancel |
| CANOR | Physician cancelled order = cancel |
| CLTD | Clotted = cancel |
| DBN | Has been drawn by nurse/physician =cancel |
| DUPL | Duplicate request = reschedule or cancel |
| EMLA | EMLA cream not used.= reschedule for next round |
| FLOOR | Floor ordered incorrectly = reschedule or cancel |
| IMCL | Improperly collected = cancel |
| IMPS | Wrong tube/specimen type = cancel |
| IVON | IV running = reschedule |
| LABLU | Unsatisfactory specimen/no label = cancel |
| LABN2 | Lab unable to obtain after 2 attempts = reschedule 22:00 |
| LABUN | Lab unable to obtain = reschedule for next round |
| LOST | Lost in transit to reference lab = cancel |
| NABD | No armband identification = cancel |
| NO | No sample received= cancel |
| NOARM | No available arm = reschedule next round |
| NOICE | Not received on ice = cancel |
| NOLT | Sample not protected from light = cancel |
| NOTIM | Not time = reschedule for appropriate time |
| NOWARM | Sample not kept warm = cancel |
| OLD | Stability limit exceeded when received = cancel |
| ORINC | Lab ordered incorrectly = cancel |
| PBATH | Patient in bathroom = reschedule for next round |
| PCATH | Portacath = reschedule for 22:00 |
| PCOM | Patient combative/abusive = reschedule for next round |
| PDIAL | Dialysis to collect = cancel |
| PDIS | Patient discharged = cancel |
| PFAM | Family requested to be rescheduled = rescheduled for next round |
| PNA | Patient not available = rescheduled for next round |
| PNF | Patient not fasting = cancel |
| POR | Patient out of room = reschedule for next round |
| PRBL | Patient receiving blood = reschedule for next round |
| PREF | Patient refused = reschedule for next round |
| PREQ | Physician requested to be reschedule = reschedule for next round |
| PRS | Patient requested to be rescheduled = reschedule for next round |
| PSICK | Patient nauseous = reschedule for next round |
| PSUR | Patient in surgery = cancel or reschedule |
| PTF | Patient transferred to another unit = cancel |
| PWP | Physician with patient = reschedule for next round |
| QNS | Quantity not sufficient = cancel |
| SHORT | Too little blood for anticoagulant = cancel |
| SPACC | Special Account = cancel |
| TBDBN | To be drawn by nurse/physician = reschedule for 22:00 |
| USAT | Unsatisfactory specimen = cancel |

**3) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures:** 
   1. **Hand Hygiene Medical Center Policy on the Infinet**
2. **References: N/A**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures**

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|  | **Competency Assessment**  **IPP#12** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:**  To give guidelines to staff concerning the proper process for competency assessment.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Scope:** 
     1. Procedure owner/Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure: Competency Assessment**

In order to assure that each employee is capable of understanding and utilizing the policies, procedures and practices specific for Inpatient Phlebotomy, standardized Competency Assessment Testing will be given upon completion or the training period and on an annual basis. Competency will be accessed by written exam and through performance observations designed to demonstrate employee's ability to locate information, demonstrate safety practices, patient focus, decision making skills, and to conduct their routine daily activities.

a) Competency Assessment will cover four areas of assessment. These are:

i. Safety

ii. Phlebotomy Responsibilities

iii. LIS (Laboratory Information System, Beaker/Rover)

iv. Job Specific knowledge

b) Competency Assesment will be in the form of a written exercise for the following job levels in Inpatient Phlebotomy:

i. Phlebotomy Tech I, II and III

ii. Inpatient Phlebotomy Coordinators

c) Competency Assessment is performed in the following manner:

i. Each employee is visually evaluated for the performance of daily operations.

ii. Each employee will receive a written test that covers the four areas of assessment mentioned above.

iii. The employee will be taken to a classroom, office, or conference room - away from the work area and distraction -- a place to concentrate.

iv. The employee is allowed to use the all pertinent written reference material during the competency assessment.

d)All Inpatient Phlebotomy employees are evaluated at the completion of a 90-day and 180-day training period (full time or part time) and at the time of annual review.

e)Satisfactory completion of the written Competency Assessment requires an overall score of 85%.

f)If, for any reason, a Competency Assessment score is lower than 85% the employee will be retested.

g)If, for any reason thereafter, a Competency score is lower than 85%, the employee will receive documented re-training/orientation over a three month period. After which, the employee will again be Competency assessed.

h) If, after documented re-training/orientation, the employee's Competency score is lower than 85% the Phlebotomy Manager will evaluate both the scores and the re-training/orientation, and together with Lab Administration will formulate a resolution.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: N/A**
2. **References: N/A**
3. **Attachments:** **Competency Assessment checklist IPP#12.1**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Limitations to Service**  **IPP#13** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:** To give guidelines to staff concerning the proper Process for adhering to the Limitations to Service.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson
     3. Who Performs procedure: Inpatient Phlebotomy

**Procedure: Limitation to Service**

The Phlebotomy Team obtains samples from unencumbered arms or hands. Unsuccessful attempts at venipuncture, for tests that cannot be performed on capillary samples, or for patients with certain restrictions, will result is sample collection reverting to the Medical Team.

* 1. Specimens that require collection by the Medical Team typically include the following circumstances:
     1. Arterial Samples
     2. Samples that are not obtained after 2 attempts by 2 different phlebotomists.
     3. Samples that require special collection technique, timing or handling.
     4. Samples from arms where IV fluids are running. (See policy in this manual for Performing Venipuncture on Patients with Intravenous Lines)
     5. Samples from arms with open wounds or arms extensively bandaged.
     6. Samples from arms severely edematous.
     7. Samples from arms that have fistulas or shunts. (See Notes on Procedure for this policy)
     8. Samples from an arm on the side of a mastectomy.
     9. Combative or uncooperative patients. A patient who refuses venipuncture will have the draw rescheduled for the next round. The phlebotomist will report the refusal to the nurse. If the patient refuses on the next round then the phlebotomist will report to the nurse that the lab will have to cancel the order until the patient is convinced to have the blood drawn.
  2. **Performing Venipuncture on Patient with Intravenous (IV) Lines** 
     1. Blood should not be drawn from a patient's arm when an IV solution is being administered in that arm.
     2. Blood drawn above the intravenous infusion site can be diluted with the intravenous fluid being administered.
     3. Also, the IV infusion solution may contain the analyte to be tested. Test results from this blood sample will be erroneous and thus misleading to the physician.
     4. The phlebotomist should look for a venipuncture site in the opposite arm.
     5. A good second option may be performing a skin puncture when venous access in not readily available.
     6. Rarely, a patient will have IV's running in both arm and/or hands and a skin puncture is not a suitable sample. When that is the case the phlebotomist may have no choice but to obtain the sample from an arm that has an IV line attached.
        1. Ask the nurse for the IV to be turned off for at least 2 minutes before the venipuncture.
        2. Apply the tourniquet below the infusion site and select a vein that appears to be a different vein from the IV site.
        3. Perform the venipuncture according to departmental procedures.
  3. It must be indicated with a comment that this sample was drawn from an arm that had an IV line that was turned off and indicated if it was drawn above or below the IV site.
  4. **BLOOD COLLECTION FROM PATIENTS WITH HEPLOCKS/SALINE LOCKS** 
     1. Phlebotomists are approved to perform venipuncture from either above or below a heplock or a saline lock.
     2. A physician's written order must be documented on the chart and communicated to the Phlebotomist authorizing this procedure.
        1. It must be noted on the requisition or patient’s chart that the samples were obtained above or below a heplock or saline lock.
        2. Using standard venipuncture procedure, the samples may be obtained using either syringe or the Vacutainer method.
     3. This procedure does not include drawing blood from the heplock or saline lock

Itself, this should never be attempted by a phlebotomist.

* 1. **When a Specimen on a Collection List Is Not Obtained**
     1. Phlebotomists report to the patient’s nurse or the charge nurse that the specimen was not obtained.
     2. Document the explanation for why the specimen was not obtained on the uncollected lab form
     3. The nurse initials beside of the explanation and indicates if the test needs to be rescheduled for the next round.

## When Two Phlebotomists Are Unable to Obtain a Sample

* + 1. When the second phlebotomist cannot obtain a suitable specimen after 2 attempts, the nurse in charge of the patient is informed that the laboratory is unable to obtain blood on this patient. The nurse will sign a slip indicating notification of the failure to collect the sample. Nursing will inform the medical team.
    2. Cancel the test with the appropriate reason code.
    3. Write the patient name and location as a LABUN X 2 on the dry erase board.

**Procedure notes**

1. Because of potential sources of error, avoid collecting blood from a known previous infusion site for 24 hours. Phlebotomists may only know this information if the patients tell them.

2. The phlebotomy staff may attempt to obtain specimens from a patient with an inactive fistula if the attending physician has documented this approval in the patient’s chart.

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: N/A**
2. **References: GEN.57000**
3. **Attachments:** **Competency Checklist #IPP13.1**
4. **Revised/Reviewed Dates and Signatures:**

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|  | **Special Collection and Handling for Clinical Chemistry**  **IPP#14** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Special Collection and Handling for Clinical Chemistry.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy, Chemistry Lab
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Special Collection and Handling for Clinical Chemistry**
2. **Policy Guidelines** 
   1. Chemistry specimen requirements are communicated to the Inpatient patient Phlebotomy department by way of the Pathology Laboratory Handbook, memos, and the Laboratory Information System.
   2. The LIS database contains the specimen requirements for all orderable laboratory tests.
   3. This information is printed on the barcode labels.
   4. Procedure Notes
      1. The patient name and medical record number (or date of birth) is used to identify patients and their samples.
      2. Specimens are labeled with name, medical record number, and barcode label.
      3. Specimens for routine clinical chemistry assays are delivered to the laboratory within 1.5 hours of collection time.
      4. Special handling requirements apply to many tests. The four most common tests that require special handling are listed below:

|  |  |  |
| --- | --- | --- |
| **TEST** |  | **SPECIAL HANDLING** |
| Ammonia |  | Green top tube, put on ice and deliver within 30 minutes |
| Lactic Acid |  | Gray top tube. Do not leave tourniquet on > 1 mins. Submit sample on ice if requested. |
| Intact PTH |  | Lavender top tube on ice, deliver within 30 minutes |
| Vitamin levels |  | Protect from light by placing in an amber bag, or wrapping in foil or a paper towel |

* 1. Serum Separator Tubes (SST) is considered an additive tube while the plain red top tube (glass) is considered a plain tube. Plain tubes are drawn before additive tubes.
  2. Most chemistry tests performed at DMC laboratory have a dark green lithium heparin tube as preferred tube type. Refer to chart at end of this manual for specific tests and specimen requirements for DMC laboratory.
  3. Quantiferon Test Orders
     1. Quantiferon testing requires special collection and handling of the specimens.
     2. A Quantiferon collection kit must be used, as it contains special tubes specific for this testing.
     3. Collect 1 ML of blood into each of the blood collection tubes.
     4. Hold tube on needle for 2-3 seconds after flow ceases.
     5. Shake tubes firmly about 10 times, until frothy.
     6. Label tubes according to policy.

|  |  |
| --- | --- |
| **TEST** | **SPECIAL HANDLING** |
| Ammonia | Green top tube, put on ice and deliver within 30 minutes |
| Cryoglobulins | Plain red top tube, keep warm by saturating a towel with hot water and wrapping it around the tube, place tube in a “ziplock” style bag and deliver within 30 minutes. May also be transported wrapped in a heel warming device. |
| Vitamin D | Protect from light by wrapping in foil or a paper towel. |

1. Serum Separator Tubes (SST) are considered an additive tube while the plain red top tube is considered a plain tube. Plain tubes are drawn before additive tubes.
2. The most common tests drawn in SST’s are listed below. Patient requisitions will indicate if these tests require patients to be fasting or drawn at special times.

|  |  |  |
| --- | --- | --- |
| **Test Abbreviation** | **Test**  **Name** | **Test**  **Components** |
| BMEP | Basic Metabolic Panel | Na, K, Cl, CO2, BUN, Gluc, Crea, Ca |
| CMEP | Complete Metabolic Panel | BMEP + Protein, Albumin, Total Bilirubin, Alk.Phos.,SGOT, SGPT |
| HFP | Hepatic Function Panel | SGPT, SGOT, Protein, Albumin, Alk. Phos,, Total Bilirubin, Direct Bilirubin |

**GLUCOSE TOLERANCE TEST (GTT)**

**PROCEDURE:**

1. If a GTT is scheduled by calling Inpatient Phlebotomy, the following information should be requested: Patient name, Medical Record number, date requested, patient height and weight. No GTT can be scheduled for Saturdays, Sundays or holidays.

2. The patient must be fasting from midnight until the last sample has been drawn. There can be no interfering IV's running. *The patient can drink only water during this procedure.*

3. The phlebotomist will draw the fasting sample, then dose the patient with a 75gm (or prescribed dose if written on the requisition) glucose solution. For patients weighing less than an amount specified by the pediatric endocrinology section, the calculation is based on the patient's height and weight and is determined by the physician.

4. The timing of all draws starts with the time the fasting was drawn. The following Tolerance batteries and timed samples will then be drawn:

**Beaker Code** **TEST** **SAMPLES INCLUDE**

GTT2 GTT 2 hour Fasting / 1-hour / 2 hour

GTT3 GTT 3 hour Fasting / 1-hour / 2-hour 3-hour

GTTOB GTT Obstetrical Fasting / 1-hour / 2-hour / 3-hour

GTT5 GTT 5 hour Fasting / 1-hour / 2-hour / 3-hour / 4-hour

5-hour

Obstetrics patients will have a Sullivan's test or a 1 Hour Tolerance that only requires that the patient drink the specified solution and then draw the sample 1 hour after the solution is consumed.

GLU GLU-; 1 hour pc Fasting / 1-hour

No corresponding urine samples are necessary unless specifically ordered by the physician.

**Procedure Notes**

1. Before submitting the samples to the laboratory, the phlebotomist must be sure to write on each label which sample in the series is in each tube. Clearly label samples as fasting, 30 minute, 1 hour and so on.

2. If for any reason a patient cannot complete the test submit the samples collected and call the doctor.

3. Patients should remain in designated waiting areas during the procedure.

**4) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

**5) Related Procedures: IPP#9 Collection**

**6) References: N/A**

1. **Attachments:** **N/A**
2. **Revised/Reviewed Dates and Signatures:**

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| --- | --- | --- | --- |
| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
|  | 3/5/2019 | Revised signature page | Laurie Watson, MT, ASCP |
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|  | **Specimen Collection Procedures for Microbiology**  **IPP#15** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Blood Culture prep and collection and therapeutic drug monitoring.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy, Microbiolgy
      2. Procedure prepared by: Laurie Watson MT(ASCP)
      3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Specimen Collection Procedures for Microbiology**
   1. **Blood Culture Collection Media**
      1. Blood culture collections are one of the most important functions of the microbiology laboratory as clinicians rely on this information to aid in the diagnosis of bacteremia and fungemia.
      2. Routine blood cultures are drawn in 2 BACTEC® Blood Culture bottles. Fungal blood cultures are collected in BACTEC MYCO/F LYTIC blood culture bottles. Pediatric Cultures are collected using the BACTEC Peds Plus TM /F bottles. AFB blood cultures are collected in the BACTEC MYCO/F Lytic blood culture bottle.
      3. BACTEC /F Blood Culture Media permit screening for bacteria, yeast and fungi present in the blood. It is an all-purpose enriched soybean-casein digest broth media. These media contain resins for antibiotic neutralization, providing increased recovery as compared with Standard Media. BACTEC bottles are capable of supporting growth of common obligate anaerobic, aerobic, and facultative organisms.
      4. BACTEC Peds Plus TM /F Medium is specialized media that accommodates small-volume samples (<+3mL of blood) to optimize detection of common pediatric pathogens.
      5. Bottles should be stored at 2-25˚C in a dry location OUT OF DIRECT LIGHT.
      6. Do Not use after expiration date on bottle. It is the responsibility of the person collecting the sample to verify the expiration date.
      7. Prior to use, each bottle should be examined for evidence of contamination such as cloudiness, bulging or depressed septum, or leakage. DO NOT USE any bottle showing evidence of contamination, leakage or damage.
2. **Materials required for Routine Blood Culture:** 
   1. Blood Cultures can be collected by any of the following methods. Specific information for how to perform each of these procedures can be found in the Specimen Collections Procedure :
      * 1. Venipuncture using a vacutainer
        2. Venipuncture using a vacutainer adapted Butterfly Blood Collection Set
        3. Venipuncture using a vacutainer adapted Butterfly Collection set with a syringe
      1. Selection of the correct bottles is necessary to ensure proper testing.
         1. For fungal or AFB cultures, obtain blood in a BACTEC MYCO/F LYTIC Bottle
         2. For Blood Cultures, obtain blood in a BACTEC aerobic and anaerobic bottles
         3. For Pediatric collections, obtain blood in a BACTEC Peds Plus TM /F bottle.
      2. Chlorhexidine prep kit
      3. Appropriate collection materials for collection method selected
      4. Latex free Tourniquet
      5. Gauze
      6. Latex free Gloves
      7. Adhesive bandage or tape
   2. **PROCEDURE** 
      1. Use a sterile Chlorhexidine prep kit to cleanse the venipuncture site as follows:
         1. Pinch the wings on the applicator to break the ampule and release the antiseptic.
         2. Do not touch the sponge. Squeeze the wings until the sponge is visibly moist.
         3. Use back and forth strokes for 30 seconds to thoroughly clean the site.
         4. Allow to air dry for 30 seconds
            1. **IMPORTANT:** For pediatric collections (< 2 months of age) clean a 2 ½ diameter area around the phlebotomy site ONLY with alcohol followed by povidine-iodine solution, then alcohol. To remove the iodine. (Iodine may be obtained from the ED)

**DO NOT USE CHORHEXIDINE PREP on patients < 2 months of age.**

* + - 1. DO NOT touch the site after skin prep. If palpitation is necessary, sterile gloves should be applied prior to palpation.
      2. Disinfect the top of the bottles with alcohol, using one alcohol pad for each bottle.
      3. Collect the sample using an approved venipuncture method found in the specimen collections procedure.
      4. Label bottles and document where the specimen was drawn, date, and time

1. **Procedure Notes**
   * + 1. Optimum volume in the BD BACTEC aerobic and anaerobic bottles is 8-10 mL of blood.
       2. Always fill the Aerobic (grey top) bottle first before filling the Anaerobic (purple top) bottle or the fungal/ mycotic (white top) bottle.
       3. The 5 ML marks on the sides of the bottles may be used as a guide.
       4. If using a syringe, a 20 CC syringe should be used. Draw up 16 – 20 mL of blood and divide equally between the aerobic and anaerobic bottles. Directly inoculate the bottles by puncturing the bottle septum with the needle and syringe.
       5. Pediatric (pink top) bottles optimal volume is 1-5 mL. Collect 1 mL for each year of age up to the age of 5.
       6. Draw a separate BACTEC Myco-F bottle and submit an explicit request for AFB Culture when this test is requested.
       7. Blood Culture samples are drawn before any other sample.
       8. For pediatric patients 9 and under, draw 1 ml/year of age.

**Blood Cultures for Acid Fast and Fungal Cultures****.**

**Materials required:**

Vacutainer Holder and needle or Syringe and Needle

1. Chlorahexidine prep kit
2. BACTEC blood culture bottles
3. Tourniquet (disposable/latex free)
4. Gauze
5. Gloves (latex free)
6. Adhesive bandage or first aid tape

**PROCEDURE:**

1. Use a Chlorahexidine prep kit to cleanse the venipuncture site as follows:
   1. Pinch the wings on the applicator to break the ampule and release the antiseptic. Do not touch the sponge. Wet the sponge by repeatedly pressing and releasing the sponge against the skin venipuncture site is visibly moist.
   2. Use repeated back and forth strokes of the applicator for 30 seconds to thoroughly clean the site.
   3. Allow to air dry for 30 seconds.
   4. Do NOT use Chlorhexidine on children under 2 months of age. Use iodine.
   5. **IMPORTANT:** For pediatric collections (< 2 months of age) clean a 2 ½ diameter area around the phlebotomy site ONLY with alcohol followed by povidine-iodine solution, then alcohol. To remove the iodine.
2. Disinfect the STOPPER of the BACTEC Myco/F bottle with alcohol and collect the sample through that end using the closed Vacutainer system or needle and syringe. It is important that the tube be thoroughly mixed before sending it to the laboratory.
3. Using the media meniscus as a guide, mark BACTEC culture vial label(s) at desired fill level. (each hatch mark on label is approximately 10 mls).
4. Collect the sample using the closed Vacutainer system or needle and syringe.  
     
   **Important:**At least one full aerobic and anaerobic bottle of blood are required on all patients, ranging between 8-10 mls. Bottles containing less than 5 ml of blood cannot be processed. In the event that only 5-9 mls is obtained, it all goes in 1 aerobic bottle. 1.0ml-3.0 ml pediatric bottles are available for patients less than 5 years old. The pediatric bottles must contain a minimum of 1ml or those specimens cannot be processed.
5. Deliver the BACTEC bottles with a patient label attached, along with requisition, to the Clinical Microbiology Laboratory.

Ref: NCCLS Document H3-A4 Vol.18 No. 7

Chloraprep One-Step Frepp Applicators direction panel

**INSTRUCTIONS RELATED TO SPECIMEN COLLECTION FOR MICROBIOLOGY**

AMINOGLYCOSIDES (Vancomycin, Gentamycin, Tobramycin)

**PRINCIPLE:** Certain courses of antibiotic therapy require a base level (trough) drawn prior to hanging the admixture in IV form. After this antibiotic is completely infused, another level is drawn at a pre-determined time afterward when the circulating volume is thought to be at its optimum (peak).

**COLLECTION / PRESERVATION / TRANSPORTATION:**

Specimens for Aminoglycoside levels are usually scheduled to correspond to the medication protocol the patient is on. These protocols generally call for trough, peak, or random monitoring of the patient's dose. When drawing these samples the phlebotomist should be sure to check with the nurse that the trough is being drawn before the dose and the peak is being drawn at the appropriate time for the delivery method. Random monitoring does not require special draw time considerations.

**5) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

**6) Related Procedures:**

* 1. **Specimen Collection IPP#9**

1. **References:** 
   1. **ChloraPrep One-Step direction panel**
   2. **BD BACTEC Product Insert**
2. **Attachments:** **N/A**
3. **Revised/Reviewed Dates and Signatures:**

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| --- | --- | --- | --- |
| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
|  | 3/5/2019 | Revised signature page | Laurie Watson, MT, ASCP |
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|  | **Coagulation Specimen Collection and Handling**  **IPP#16** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Coagulation Specimen Collection and Handling.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy, Coagulation Lab
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who Performs procedure: Inpatient Phlebotomy

**2) Procedure: Coagulation Specimen Collection and Handling**

The collection and handling of coagulation test samples are an important preanalytical step in coagulation studies. These specimens are collected and handled as approved by the Coagulation Lab.

**Procedure:**

1. **Policy Guidelines** 
   1. Perform venipuncture as described in the Venipuncture Procedure found in the Phlebotomy Policy and Procedure Manual.
   2. Allow the vacutainer tube to fill completely.
   3. The Sodium Citrate (NaCit) must maintain a specified 1:9 (9 parts blood and on part of 3.2% sodium citrate) ratio in order to test the sample effectively.
   4. Mix the tube by gentle inversion. Invert the tube gently three or four times immediately after venipuncture to ensure thorough and proper mixing of blood and anticoagulant
   5. Maintain the specimen at room temperature during transport to the laboratory.
   6. Deliver the specimen to the laboratory with 1 hour of the collect time.
   7. The specimen is spun and tested as soon as possible when received in the laboratory.
   8. Patients who are being tested for coagulation studies may be prone to excessive bleeding after the venipuncture. The phlebotomist should visually verify that the puncture site has stopped bleeding before allowing the patient to leave the room.
2. **Procedural Notes and Policies**:
   1. The laboratory will reject specimen tubes that are not properly filled or are clotted.
   2. The anticoagulant of all coagulation testing is buffered sodium citrate and the concentration of 3.2% or 0.109 M which is a buffered solution that is a stabilizer for labile factors V and VIII.
   3. Collection for coagulation specimens require that a plain tube or “waste” tube be collected before the coagulation specimen tube when using a butterfly needle.
   4. The light blue top NaCit tube should be collected prior to any additive tube when there are multiple tubes to be collected.
   5. Heparin, EDTA, clot activators and other additives found in collection tubes will all interfere with coagulation testing if contamination of the collection apparatus occurs.
   6. Routine coagulation samples should be the first tube collected, unless sterile samples or a plain redtop tube is to be collected.
   7. Special coagulation test should have a plain read tube before light blue.
   8. If blood is drawn from an indwelling catheter, the line should be flushed with 5.0 ml saline and the first 5 ml of blood is discarded.
   9. The citrate concentration must be adjusted in patients who have hematocrit values above 55%. (see below).
   10. Collection of specimens from IV lines that have been flushed with heparin should be avoided.
   11. The NaCi evacuated tubes are manufactured to draw 2.7 ml (0.3 ml NaCit) or 1.8 ml (0.2 ml NaCit) of blood creating a blood to anticoagulant ratio of 9:1.
   12. If the specimen volume is less than the indicated fill volume on the blood draw tube

(up to the opaque line on BD tubes) it is unsuitable for coag testing.

* 1. The following tests require Sodium Citrate tubes for coagulation testing and are performed at DMC-BR
     1. Prothrombin Time (PT)
     2. Partial Thromboplastin Time (PTT)
     3. D - Dimer test
     4. Fibrinogen
     5. Factor Assays
     6. Thrombin Clotting Time
     7. Thrombophilia screen
     8. Plasminogen
     9. Protein C & S
     10. DIC Panel (requires 2 blue top tubes)
     11. Antithrombin III
     12. Heparin Aggegrate Study (requires 4 blue top tubes)

1. Elevated Hematocrit Procedure
   1. Samples with an elevated Hematocrit ( <55%) require special collections.
   2. The anticoagulant of choice for all coagulation testing is buffered sodium citrate (NaCit). The concentration in use at NCBH is 3.2% or 0.109 M. The buffered solution is a more efficient stabilizer for labile factors V & VIII. Sodium Citrate tubes (2.7 milliliters or 1.8 milliliters) submitted for Coagulation testing must contain a minimum of 90% of the optimal draw volume maintaining a 9:1 ratio of blood to anticoagulant. If the specimen volume is less than 90% of the indicated fill volume on the blood draw tube (within the black arrow on Greiner tubes; up to the opaque line on BD tubes) it is unsuitable for coagulation testing; the floor/unit is notified and the orders for that specimen are canceled with the code QNS. Special testing (any testing other than PT/PTT) will be evaluated on a case-by-case basis by the team coordinator for coagulation or medical director for consideration.  For patients with hematocrit values above 55%, the amount of citrate in a standard 2.7mL or 1.8mL sodium citrate tube (light blue top) must be adjust to yield the proper concentration for the 9:1 blood to anticoagulant ratio. The final citrate concentration in the blood should be adjusted in patients with hematocrit values above 55%. In samples with an elevated hematocrit, the blood-to-anticoagulant ratio drops below 9:1, causing excess citrate for the volume of plasma present in the tube. This leads to excess binding of the calcium added to the clotting test reaction and the possible dilutional effect due to the volume of liquid anticoagulant present, which may lead to an increased clotting time.
   3. For patients with hematocrits greater than 55%, the citrate concentration in the collection tube must be adjusted by removing a portion of the volume of the citrate solution. To calculate the amount of citrate required in the collection tube, use the following formula:

X = (100-PCV) (volume of blood in tube)

(595-PCV)

**X**= Volume of sodium citrate **required** for unit volume of blood

**PCV** = Packed cell volume (hematocrit)

**Volume of blood in tube** = size of the collection tube, either 2.7 or 1.8

For example, for a patient whose hematocrit is 60%, and the blood is collected in a 2.7mL blue-top tube, the calculation should be as follows:

(100-60)x2.7     =        **0.2 mL of sodium citrate that remains in the tube**

   (595-60)

Or the same patient using an 1.8mL tube:

(100-60)x1.8   =     **0.13 mL of sodium citrate that remains in the tube**

                              (595-60)

The BD Vacutainer Citrate tubes contain the following volumes:

·       2.7 mL draw contains 0.3 mL of sodium citrate

·       1.8 mL draw contains 0.2mL of sodium citrate

Thus, by our example above, we would remove 0 .1mL, or 100uL, of citrate from the2.7mL tube using a 100uL MLA pipette, and the person drawing the blood would fill to the regular fill line as indicated on the tube.  For the 1.8mL citrate tube, using our example above, we would remove 70uL .

(Per Coagulation Manual, Wake Forest Baptist Health, Winston Salem, N.C.)

1. If the patient’s elevated hematocrit is discovered after the specimen has been collected, the patient’s physician will be notified and the patient called back for a recollection.

If the physician does not want a re-draw, please document with a comment: “Patient’s hematocrit is >55%. Coagulation results may be affected” then document who you notified.

Ex: “Patient’s hematocrit is >55%. Coagulation results may be affected. Notified Dr. Matthew Cline at 220pm”.

1. Lab staff will be responsible for providing phlebotomist with a sodium citrate corrected tube as necessary.
2. Special Coagulation Procedures being sent to main campus
   * 1. Please call : 716 – 4511
3. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: IPP#9 Specimen Collection**
2. **References: N/A**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
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|  | **Acceptable Samples for Hematology and Special Hematology**  **IPP#17** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:** To give guidelines to staff concerning the proper for acceptable samples for Hematology and Special Hematology.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy, Special Hematology
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Acceptable Samples for Hematology and Special Hematology**

The anti-coagulant of choice for routine hematological testing is EDTA (purple top tube). EDTA maintains the morphology of the blood cells and keeps platelets from clumping as well as keeping the blood from clotting.

* 1. Acceptable Samples for Hematology and Special Hematology
     1. The anticoagulant of choice for routine hematological testing is EDTA (purple top tube).
     2. EDTA maintains the morphology of the blood cells, keeps platelets from clumping, and keeps the blood from clotting.
  2. The following tests are done using EDTA anti-coagulated blood:
     1. CBC
     2. Differential
     3. Platelet Count
     4. WBC
     5. Hematocrit/Hemoglobin
     6. Sed Rate/ESR(This can also be done in Sodium Citrate ESR tube)
     7. Retic count
     8. Sickle Cell Determination
     9. Total Eosinophil Count
     10. Flow Cytometry
  3. All EDTA tubes submitted to Hematology Laboratory should be at least 1/2 full for the proper ratio of blood to anti-coagulant. Minimum draw is 1 ml.
  4. Most tests done in Hematology may be done using capillary blood samples.
     1. These tests include the following with the minimum requirements:
        1. CBC 1 EDTA microtainer
        2. Retic count 1 EDTA microtainer
        3. ESR 1 EDTA microtainer
        4. Flow Cytometry 2 EDTA microtainer
  5. The following test requires serum for testing
     1. Serum Osmolality-2ml minimum
  6. NOTES:
     1. When specimens are clotted, Hematology staff will notify the appropriate persons.
     2. Lab staff will submit an order in Beaker for Recollect for patient’s from the ED
        1. 2 EDTA tubes should be full if an ESR is ordered in addition to the CBC.
     3. Any specimen deemed unacceptable for Hematology work will be called to the ordering nursing unit to be reordered or recollected as necessary.
     4. A citrate (light blue) tube may be collected in the event platelet clumping is present. Follow specific guidelines for testing a CBC with this tube type found in the hematology manual.
  7. COLLECTION / PRESERVATION / TRANSPORTATION:
     1. Specimens are maintained at room temp (22 degrees C) during transport.

All specimens are transported to the laboratory in a biohazard bag

**Procedure Notes:**

* + - 1. When specimens are clotted, Hematology staff will notify the nursing unit.
      2. Nursing will then reenter the order for collection if necessary. EDTA tubes should be half full (1/2ml) if an ESR is ordered in addition to the CBC
      3. Any specimen deemed unacceptable for Hematology work will be called to the ordering nursing unit to be reordered or recollected as necessary.

**COLLECTION / PRESERVATION / TRANSPORTATION:**

Specimens for Special Hematology are collected and delivered to Central Processing as soon as possible. Specimens are maintained at room temperature (22' C) during transport. Plasma Viscosity, Whole Blood Viscosity and Osmotic Fragility are extremely sensitive to prolonged periods of time and Special Hematology should be alerted as soon as these samples are delivered.

**SPECIAL HEMATOLOGY TESTS/REQUIREMENTS:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Special Hematology/Coagulation Laboratory** | | |
|  | **Room 3123F, 3rd Floor Gray Bldg** | | |
|  | **Phone 6-4511 Open Mon - Fri 8am - 5 pm** | | |
|  |  |  |  |
| **Tests offered:** | **Tube Type** | **LIS Test Code** | ***If after hours...*** |
| **Leukocyte Alkaline Phosphatase (LAP)** | **1 Green Top** | **LAPS** | **send to hematology lab to make slides** |
| **Whole Blood Viscosity** | **2 Purple Tops** | **BVISC** | **send to WFBH Central Processing** |
| **Plasma Viscosity** | **2 Purple Tops** | **PVISC** | **send to WFBH Central Processing** |
| **Osmotic Fragility** | **1 Green Top** | **OSFRG** | **must receive by 3pm - call upon receipt if before 3pm** |
| **Thrombophilia Functional Panel (Protein S, Protein C, Plasminogen, AT3)** | **1 Blue Tops** | **THFP** | **send to WFBH Central Processing** |
| **Thrombophilia Genotype Panel (Factor V Leiden, F2 Genotype)** | **1 Blue Top** | **THGP** | **send to WFBH Central Processing** |
| **Protein C Activity** | **1 Blue Top** | **PRTCA** | **send to WFBH Central Processing** |
| **Protein S Activity** | **1 Blue Top** | **PRTSA** | **send to WFBH Central Processing** |
| **Protein C & S** | **1 Blue Top** | **PRTSC** | **send to WFBH Central Processing** |
| **Plasminogen (Activity)** | **1 Blue Top** | **PLGNA** | **send to WFBH Central Processing** |
| **Factor V Leiden Genotype** | **1 Blue Top** | **FVX10** | **send to WFBH Central Processing** |
| **MTHFR Genotype** | **1 Blue Top** | **MTHR** | **send to WFBH Central Processing** |
| **F2 Genotype (Prothrombin 20210)** | **1 Blue Top** | **F2** | **send to WFBH Central Processing** |
| **Hemochromatosis Genotypes** |  |  |  |
| **Cys282Try** | **1 Blue Top** | **HFECT** | **send to WFBH Central Processing** |
| **His63Asp** | **1 Blue Top** | **HFEHA** | **send to WFBH Central Processing** |
| **ADAMTS13 activity** | **1 Blue Top** | **ADMS13** | **send to WFBH Central Processing** |
| **ADAMTS13 inhibitor** | **1 Blue Top** | **ADM13I** | **send to WFBH Central Processing** |
| **von Willebrand Factor Activity** | **1 Blue Top** | **VWFACT** | **send to WFBH Central Processing** |
| **von Willebrand Factor Antigen 1 Blue Top VWFAG send to WFBH Central Processing** | | | |
| **von Willebrand Multimers** | **1 Blue Top** | **VWFM** | **send to WFBH Central Processing** |
| **Von Willebrand Disease Panel 1 Blue Top VWDP send to WFBH Central Processing** | | | |
| **JAK2 V617F Mutation 1 Blue Top JAK2VF send to WFBH Central Processing** | | | |
| **Heparin Induced Platelet Antibodies** | **1 Blue Top** | **HIPA** | **send to WFBH Central Processing** |
| **Special Hematology will pickup samples from Referral Testing M-F 8am, 12pm and 3pm** | | | |

**\*After 3pm all blue tops should be spun, plasma frozen and cells put in refrigerator in Referral Testing.**

**If you have any questions, don’t hesitate to call Caryl, Becky, Melanie or Diane at 6-4511**

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| **Thrombophilia screen (TBSC) requires 3 aliquots of plasma; as full as possible.** |

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: Specimen Collection IPP#9**
2. **References: N/A**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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| Review Date: | Revision Date: | Reason: | Signature: |
|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
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|  | **Collection and Labeling of Blood Bank Samples**  **IPP#18** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:** To give guidelines to staff concerning the proper process for collecting and labeling samples for Blood Bank,

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy, Blood Bank
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Collection and Labeling for Blood Bank Samples**

The collection of a properly identified blood sample from the intended recipient is an essential step for a safe blood transfusion. Blood Bank samples that will be used for identifying blood products for recipients require 2 forms for identification. These forms are the Wake One Request Form and the hospital identification band. These identifications include the medical record number and the patient’s name.

**PROCEDURE:**

1. Confirm the patient name and medical record number on all documents. Requests for cross matches will be a Wake One Blood Bank requisition. The requisition and the patient armband must have exactly the same information. Any observed discrepancies must be resolved before the sample is collected.
2. Collect the blood sample following the Venipuncture Procedure IPP#9. The Blood Bank requires one 7 mL pink top EDTA for testing. Three purple bullets may be substituted for pediatric patients.
3. Date a BBID number bracelet and place it on the patient’s arm.
4. Attach labels to the specimen tubes at the bedside. Acceptable labels include barcoded lab generated labels or document labels. Each label contains the following information:
5. The patient’s full name, as it appears on the forms and patient identification bracelet
6. Medical record number
7. Patient’s date of birth
8. BBID number armband with the expiration date on it
9. Write the name of the collector on the Blood Bank requisition form along with the date and time collected.
10. Deliver the sample to the Blood Bank. Always inform someone in the Blood Bank that a specimen is being delivered.

**Procedure Notes**

1. Incorrectly labeled samples will not be returned for corrections.
2. A crossmatch sample may be used for 3 days. The day drawn counts as day 0 and expires at midnight of day 3. (Example: A sample drawn on Monday expires at midnight Thursday.)
3. Remove the old Blood Bank armbands after the crossmatch has expired.
4. The Blood Bank may request additional samples to be drawn on a patient. The phlebotomist will be instructed as to how much blood will be required as well as how much blood to draw. The current BBID number must be written on each tube.
5. Not all tests performed in the Blood Bank require a BBID. The table below lists the orderable tests and the BBID requirement.

|  |  |  |
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| **Test Code** | **Procedure** | **BBID** |
| XM | Crossmatch | Yes |
| TSX | Type and Screen | Yes |
| TPL | Transfuse Platelets | No |
| TCRY | Transfuse Cryoprecipitate | No |
| TFFP | Transfuse Plasma | No |
| GTX | Group and Type | No |
| DATX | Direct Antiglobulin Test | No |
| TNEO | Transfuse Neonate | No |
| UADX | Antibody Screen | No |

1. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures: IPP#9 Specimen Collection**
2. **References: GEN.40493**
3. **Attachments:** **N/A**
4. **Revised/Reviewed Dates and Signatures:**

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|  | 3/6/2017 | Reformatted to Medical Center standard template | Laurie Watson, MT, ASCP |
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|  | **Refrigerator Temperature Verification**  **IPP#19** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

* + - * 1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for monitoring refrigerator temperatures.
        2. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
        3. **Responsible Department/Party/Parties:**

Procedure owner/ Implementer: Inpatient Phlebotomy

Procedure prepared by: Laurie Watson MT(ASCP)

Who Performs procedure: Inpatient Phlebotomy

**4) Procedure: Refrigerator Temperature Verification**

In order to comply with safety and infection control standards the laboratory will check refrigerator temperatures daily.

Laboratory refrigerators have their temperature verified daily to assure that the contents are consistently maintained at 2-8° C.

Procedure Note: There are no reagent refrigerators in Inpatient Phlebotomy so temperatures are not critical.

**Refrigeration Verification**

1. Open the refrigerator door and locate the thermometer.
2. Read the temperature on the thermometer.
3. Verify that the temperature is between 2-8°C.
4. Record the temperature on the log.

**Corrective Actions**

1. If the temperature is not between 2 and 8°, then verify that the refrigerator’s contents are undamaged, remove contents to another refrigerator, and adjust the thermostat up or down accordingly. Place a “Do Not Use” sign on the refrigerator door. Check the temperature again in 30 minutes.

2. If the temperature fails to correct after adjusting the thermostat, then call engineering at extension 64841 to request a repair order. If the temperature corrects then return contents and remove sign.

**5)** **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

**6) Related Procedures:** Temperatures and Humidity Monitoring

1. **References:** COM.30725, COM.30750, COM.303775, GEN 41042
2. **Attachments:** Refrigerator temperature log#IPP19.1
3. **Revised/Reviewed Dates and Signatures:**

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|  | **Quality Assurance and Improvement Plan**  **IPP#20** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Quality Assurance and Quality Improvement Plan.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who Performs procedure: Inpatient Phlebotomy

**2)Procedure: Quality Assurance Plan**

INPATIENT PHLEBOTOMY Quality Assurance and Improvement Plan

Inpatient Phlebotomy is the section of WFBH Pathology Laboratories that is responsible for inpatient blood collection services. The quality of the blood collection service is determined by the adherence to proper Phlebotomy technique and by the timeliness, accuracy, and completeness of the total collection process.

The following performance monitors for Inpatient Phlebotomy were selected because they track common, important problems that significantly impact the quality of care received by the patients of the Medical Center. These parameters are bench marked against laboratory experiences and expectations.

**5)** **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

Pathology QA/QI Program

Inpatient Phlebotomy (QA)

INPATIENT PHLEBOTOMY Quality Assurance and Improvement Plan

Inpatient Phlebotomy is the section of NCBH Pathology Laboratories that is responsible for inpatient blood collection services. The quality of the blood collection service is determined by the adherence to proper Phlebotomy technique and by the timeliness, accuracy, and completeness of the total collection process.

The following performance monitors for Inpatient Phlebotomy were selected because they track common, important problems that significantly impact the quality of care received by the patients of the Medical Center. These parameters are bench marked against laboratory experiences and expectations.

QA MONITORS AND REPORTING

1. Phlebotomists go to inpatient nursing units with collection lists that are generated through the LIS in the laboratory. Any samples not collected must be cancelled or rescheduled in the LIS with the reason and initials of the person notified. The number of test requests that are credited for technical difficulty will be tallied monthly. This number will be tabulated and reported to the Pathology QA Committee along with any comments relating to specific problems or corrective actions. The goal is to not exceed 0.8% unsuccessful attempts.
2. The number of accidental needle-stick/blood and body fluid exposures to the phlebotomists will be recorded as an indicator of adherence to proper phlebotomy technique. These will be tabulated, reviewed, and reported as above. The goal is to keep this at one or less per month. If this threshold is exceeded, it will be investigated and retraining will occur if necessary.
3. Hand Hygiene compliance is observed throughout the month by the Infection Prevention team, and is reported monthly. The goal is to achieve 90% compliance for Wash In and Wash Out.
4. Suggestions for expansion or improvement of Inpatient Phlebotomy activities will be reviewed and documentation maintained as to the disposition of the suggestions. Documentation will include implementation, modification, outcomes or corrective action as needed.
5. Physician satisfaction is monitored by recording the complaints or concerns filed by or on behalf of the physicians.
6. Employee concerns related to safety and quality laboratory testing will be reported as they are submitted.

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| Revised  March 5, 2019 | Gregory Pomper, MD  Medical Director | Laurie Watson, MT(ASCP)  Manager, Inpatient Phlebotomy |

**Wake Forest Baptist Hospital**

**Clinical Laboratories**

**QA/QI Annual Assessment**

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| **Section:** | **Completed by:** | **Date** |
| **Inpatient Phlebotomy** | **Laurie Watson** | **March 5, 2019** |
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**Criteria Yes No Comment**

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| 1. Does the QA/QI report follow the QA/QI Plan? | **X** |  |  |
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| 2. Are monitored elements objective and measurable? | **X** |  |  |
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| 3. Are monitored elements appropriate? | **X** |  |  |
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| 4. Are appropriate data collection methods used? | **X** |  |  |
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| 5. Do indicators related to both quality and appropriateness? | **X** |  |  |
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| 6. Are patterns/trends identified on a timely basis? | **X** |  |  |
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| 7. Are action plans developed? | **X** |  |  |
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| 8. Are reports detailed enough to be useful? | **X** |  |  |
|  |  |  |  |
| 9. Has any process resulted in improved patient care? What/How? | **X** |  | **Involve Nursing Education and Wake One teams for shared Process Improvement. Items include but not limited to tube types, labeling/ordering/transporting lab samples, improving communication. Process Improvement Team in place for Shared Unit/Lab to Collect samples** |
|  |  |  |  |
| 10. Should all monitors be continued? If no, which ones. | **X** |  |  |
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| 11. Are revisions needed for the QI plan? |  | **X** |  |
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| 12. Are all staff aware (involved in) QA/QI activities? | **X** |  | **Data is shared and discussed at staff meetings and with the Process Improvement team/Nursing.** |
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| **Manager Signature:** |  |  |  |
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| **Medical Director Signature:** |  |  |  |
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|  | **Room Temperature Verification For Phlebotomy Supplies**  **IPP#21** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1) **General Procedure Statement:** To give guidelines to staff concerning the proper process for monitoring of room temperature.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who Performs procedure: Inpatient Phlebotomy

**2)Procedure: Temperature and humidity Verification**

In order to maintain the integrity of phlebotomy supplies, the air temperature is monitored to assure a suitable range. Supplies should remain within the range of 2-25\*C or 35.6-77.0\*F and humidity is monitored between 5% and 95%. Temperatures are monitored in the department storeroom and the operations where open stock is stored by the SPOT system.

* 1. The SPOT system will monitor temperatures and humidity 24 hours a day, 7 days a week, and will alert the Manager if out of range at the first occurrence.
  2. The Coordinator or designee will review the SPOT report daily
  3. The Manager will review the temperatures weekly.
  4. Verify that the temperature is between 2-25\*C or 35.6-77.0F and that the humidity is between 5-95%.
  5. Record any deviations in temperature or humidity.

**Corrective Actions**

1. If the temperature is not between the designated range, verify that the supplies are undamaged. Place a “Do Not Use” sign on the supplies. Check the temperature again in 30 minutes.

1. If the temperature is still out of range after 30 minutes, call engineering at extension 64841 to request a repair order. If the temperature corrects then return contents and remove sign.
2. A CAPA will be submitted if temperatures/humidity are out of range if testing supplies were used during that time/before remedying the situation.
3. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Procedures:** Temperature Monitoring
2. **References:** COM.30775, COM.30750, COM.30800, GEN.61300
3. **Attachments:** Temperature log IPP#21.2
4. **Revised/Reviewed Dates and Signatures:**

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|  | 3/5/2019 | Revised signature page, added SPOT | Laurie Watson, MT, ASCP |
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|  | **Eyewash Maintenance**  **IPP#22** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

**1)**  **General Procedure Statement:** To give guidelines to staff concerning the proper process for maintaining the eyewash solution bottles.

* 1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
  2. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson MT(ASCP)
     3. Who Performs procedure: Inpatient Phlebotomy

**2) Procedure: Eyewash Maintenance**

Weekly Eyewash Maintenance is performed to ensure adequate performance when needed during an emergency situation. To assure the integrity of the eyewash bottle, the seal and fluid levels are checked weekly.

1. Visually observe that the seal is intact.
2. Visually observe the volume of liquid in the bottle
3. Record the observation on the inspection log
4. Assure there is a second bottle on hand in case the first one fails one of these checks.
5. **Corrective Actions**
   1. If the seal is broken or if the wash in the bottle has evaporated, discard immediately and replace with a fresh bottle.
6. **Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

**Related Procedures: N/A**

**References:** GEN.77400

**Attachments:** **Eyewash Maintenance IPP#22.1**

**Revised/Reviewed Dates and Signatures:**

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|  | **Inpatient Phlebotomy Cart Use and Maintenance**  **IPP#23** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

**1)**  **General Procedure Statement:** To give guidelines to staff concerning the proper process for using and maintaining the Phlebotomy Cart.

1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
2. **Responsible Department/Party/Parties:** 
   * 1. Procedure owner/ Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson
     3. Who Performs procedure: Inpatient Phlebotomy

**2) Procedure: Phlebotomy Cart Use and Maintenance**

a. Inpatient Phlebotomy carts are used to transport Phlebotomy baskets, mobile identification devices, printers, phones and other supplies throughout the rounds. In an effort to promote a professional image, and to comply with Infection Prevention standards, the Phlebotomy team will maintain clean and uncluttered carts.

b. Carts are not permitted in patient rooms.

c. The handles of the carts must be wiped down with Caviwipes at the end of each shift. Carts must not contain cardboard boxes, bags taped to the sides, or rolls of tape hanging from the side of the cart. Additional supplies/batteries/labels can be transported on the carts, but they must be in containers with solid bottoms.

d. Carts will be thoroughly cleaned and pressure washed on a monthly basis, on the first business day of the month. This service is provided by facilities.

e. Tubes and other supplies are checked for expiration dates at the time the carts are emptied for cleaning.

**3) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.
* **Related Procedures: N/A**
* **References: N/A**
* **Attachments:** Cart Cleaning Schedule IPP#23.1
* **Revised/Reviewed Dates and Signatures:**

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|  | 2/21/2019 | Revised signature page, added SPOT | Laurie Watson, MT, ASCP |
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|  | **Human Blood and Body Fluid Exposure**  **IPP#24** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **2/17/2011** |
| **Revised Date:** | **March 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** To give guidelines to staff concerning the proper Process for Human Blood and Body Fluid Exposure.
   1. **Purpose:** This procedure is to serve as a guide for trained personnel in the Inpatient Phlebotomy Department to perform the services described herein. These guidelines should be used in conjunction with proper training and only by qualified Phlebotomists.
   2. **Responsible Department/Party/Parties:** 
      1. Procedure owner/ Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson
      3. Who Performs procedure: Inpatient Phlebotomy

1. **Procedure: Human Blood and Body Fluid Exposure**

Each employee in the Department of Pathology who is charged with handling either patients or patient's specimens, is in a risk category for being exposed to a disease-causing agent. This being the nature of our profession, the Medical Center has taken aggressive steps to insure the safety and treatment of an exposure. The following Medical Center policy lists the steps that employees should follow when they have been exposed to blood or body fluids.

**2) Review/Revision/Implementation:**

All procedures must be reviewed at least every 2 years.

* All new procedures and procedures that have major revisions must be signed by the CLIA Laboratory Medical Director.

* All reviewed procedures and procedures with minor revisions can be signed by the designated section manager.

1. **Related Policies: N/A**
2. **References** GEN.74000
3. **Attachments:** N/A
4. **Revision/Reviewed Dates and Signatures:**

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|  | **Phlebotomy Supplies**  **IPP# 25** | **Dept:** | **Inpatient Phlebotomy 324306** |
| **Effective Date:** | **February, 2019** |
| **Revised Date:** | **February, 2019** |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Gregory Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:** 
   1. **Purpose:**  To ensure all blood collection supplies are suitable and approved for testing.
   2. **Responsible Department/Scope:** 
      1. Procedure owner/Implementer: Inpatient Phlebotomy
      2. Procedure prepared by: Laurie Watson MT (ACSP)
      3. Who performs procedure: Inpatient Phlebotomy staff

1. **Procedure:**

* All blood collection supplies should be checked for expiration dates at the time supply orders are received into the lab.
* All blood collection supplies should be checked for expiration dates at the time the baskets are stocked and at the end of each month when Phlebotomy carts are cleaned.
* Any expired supplies found in the lab should be documented and a list given to the Manager/Coordinator(s) and then the supply should be discarded immediately. If the supplies were in use at the time of discovery, a CAPA will be submitted.
* Specific Phlebotomy supplies/Manufacturers are determined by the laboratory performing the testing. No product will be substituted until the validation studies have been signed off by the testing department’s Medical Director and an SBAR has communicated the changes to those effected. At that point, Inpatient Phlebotomy will begin using the new supplies and will assist with communication to the Nursing Units as needed.

1. **Remediation Triggers:**
   1. At the monthly audit completed by the Manager/Coordinator(s); if expired supplies are found on a Phlebotomy cart or basket, the employee will be held accountable for not following this procedure.

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| Occurrence: | Verbal Advisory | Written Advisory | Final Written Advisory | Discharge |
| 1st Occurrence | X |  |  |  |
| 2nd Occurrence |  | X |  |  |
| 3rd Occurrence |  |  | X |  |
| 4th Occurrence |  |  | (within 12 months of previous) | X |
|  |  |  |  | (within 6 months of previous) |

1. **Related Procedures: N/A**

Hospital Policy – Performance Standards Policy; IPP#23 Carts, GEN.40460

1. **References:**
2. **Attachments:**

Expired Supply Log IPP#25.1

1. **Revised/Reviewed Dates and Signatures:**

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| Review Date: | Revision Date: | Reason: | Signature: |
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|  | Checked End of Month | In Date | Phlebotomy Tech Initials: | Date: |
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Attachment A IPP#25.1

Expired supply log

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|  | **Staffing: Emergency Operating Plan (Continuity of Business Plan) – Inpatient Phlebotomy IPP#26** | **Dept:** | **Inpatient Phlebotomy 324305** |
| **Effective Date:** | **3/7/2019** |
| **Revised Date:** |  |
| **Contact:** | **Laurie Watson** |
| **Name & Title: Greg Pomper, MD Medical Director** | | **Date:** |  |
| **Signature:** | | | |

1. **General Procedure Statement:**
   1. **Purpose**: To provide guidelines to the Inpatient Phlebotomy team for maintaining lab operations during situations where laboratory operations may be completely or partially suspended.
   2. **Definition**:

This policy defines the Emergency Operating Plan (EOP) to be followed in the unlikely event of an unforeseen operational emergency where sections of the Department of Pathology are unable to provide uninterrupted patient care.

The Department of Pathology also recognizes and includes the WFBMC Emergency Management Plan as part of this EOP. The WFBMC Plan can be found at: <http://ishare.wakehealth.edu/> ehs/FDSN - 1.pdf

* 1. **Responsible Department/Party/Parties:** 
     1. Procedure owner/ Implementer: Inpatient Phlebotomy
     2. Procedure prepared by: Laurie Watson
     3. Who Performs procedure: Inpatient Phlebotomy

1. **Definitions**:
   1. Severe Weather- Tornado, hurricane, thunderstorm, winter storm or any other form of severe weather which creates an impact such that operations are interrupted.
   2. Mass Casualty-airplane wrecks, train wrecks, bus wrecks, explosions, workplace violence, cyber attacks.
2. **Procedure:**
3. Inpatient Phlebotomy keeps a documented inventory of resources it has on-site that may be needed during emergency situations.
   * Personal Protective Equipment
   * Ice
   * Paper
   * Pens
   * Flashlights/batteries
   * A copy of the FY staffing schedule
   1. In the event of a Mass Casualty, all employees will report to their home department/Manager and continue normal duties
      1. The manager or designee will submit the number of available staff available to the command center if the plan is activated.
      2. If needed, Lab Administration will notify the department of the need to dispatch staff to the Command Center for reassignment
      3. The managers of other Medical Center Phlebotomy departments will be contacted for availability of other resources to complete the lab duties of the Inpatient Phlebotomy team.
   2. In the event of Severe Weather, all employees are considered essential and should report to work.
      1. In the event that travel is not possible, team members already at the Medical Center can stay for extra hours/shifts and will be offered a meal voucher and accommodations when possible.
      2. Team members not already at the Medical Center will be encouraged to come in early or on an off shift to help accommodate the needs of Inpatient Phlebotomy.

Annual Required Training

* + All WFBMC employees are required to complete annual training on the WFBMC Disaster Preparedness Program as issued by the Department of Environmental Health and Safety.

1. Review/Revision/Implementation:
   1. Review Cycle: Annually
   2. Office of Record: Department of Pathology
2. Related Policies:

*WFBMC Emergency Management Plan*

1. References, National Professional Organizations,etc.: *NI*A; GEN.73800
2. Attachments:

A. Department of Pathology Section Manager Phone List

1. Revision Dates: January 24, 2017, January 22, 2019

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| Review Date | Revision |  | Signature |
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Attachment A I2018 Laboratory and Pathology Disaster Phone Tree 9/13/2018

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| --- | --- | --- | --- | --- |
| Name | Position - | Office Phone | | Cell Phone ' |
| Dr. Michael Cohen | Chair | 336-716-2608 | | 319-621-4443 |
| Conrad Emmerich | Senior VP Lab | 336-716-2963 |  | 336-970-7414 |
| Dr. Greg Pamper | Vice Chair CP | 336-716-7442 | 336-831-6552 |
| Lauren Elmore | Administrative Director | 336-716-1398 | | 336-816-3109 |
| Dale Dennard | Associate Director | 336-716-2611 | | 336-480-8354 |
| Joel Mabe | Associate Director | 336-716-7895 | | 336-745-5394 |
| Jane Houska | Associate Director | 336-716-3252 | | 336-287-6601 |
| Brad Knesel | Associate Director | 336-716-9143 | | 336-601-0629 |
| Melanie Haire | Lab Compliance and Quality Officer - Pathology | 336-716-4285 | | 704-202-4807 |
| Brenton Smith - Clemmons Lab | Lab Manager | 336-713-0436 | | 828-310-3166 |
| Pam Boles - LEX | Lab Manager | 336-238-4567 | | 336-462-1210 |
| Sheila Blanton - Davie | Lab Manager | 336-998-2870 | | 336-972-3036 |
| Sandra Johnston - Lab Services Catawba | Lab Manager | 336-702-1180 | | 828-381-4512 |
| Cindy Mccraw - Cornerstone | Lab Manager | 336-702-2283 | | 336--413-0412 |
| Deborah Kuehnert - Wilkes | Lab Manager | 336-651-8564 | |  |
| Sherrie Livecchi - High Point | Lab Director | 336-781-2404 | | 336-423-3603 |
| Anita Lashmit | Billing Manager | 336-716-3790 | | 336-970-7478 |
| Jane Henderson | LIS Manager | 336-713-4107 | | 336-817-7278 |
| Traci Presnell - Clarkson Campus | Business Administrator | 336-716-1621 | | 336-466-0109 |
| Trish Warren | RIS Manager | 336-716-1520 | | 336-816-1099 Personal  336-413-3646 Work |

Main Laboratory Numbers

|  |  |  |
| --- | --- | --- |
| WS Main Lab Contact # | 336-716-4311 |  |
| Lexington Main Lab Contact # | 336-238-4565 |
| Davie MC Main Lab Contact # | 336-998-2555 | |
| Cornerstone Main Lab Westchester Contact # | 336-702-2055 | |
| Wilkes Main Lab Contact # | 336-651-8550 | |
| High Point Main Lab Contact # | 336-878-6016 | |