

# Phlebotomy



## Purpose

The purpose of this presentation is to discuss the process of phlebotomy

Content provided by:  
**Institute for Nursing**



## Objectives

- To provide a foundation of knowledge and skill in the practice of phlebotomy within the NSLIJHS.
- Select appropriate equipment
- Validate skills



## General Guidelines for Phlebotomy

- Wash hands prior to collecting any specimen from patient
- Always utilize Standard Precautions during the collection of any specimen

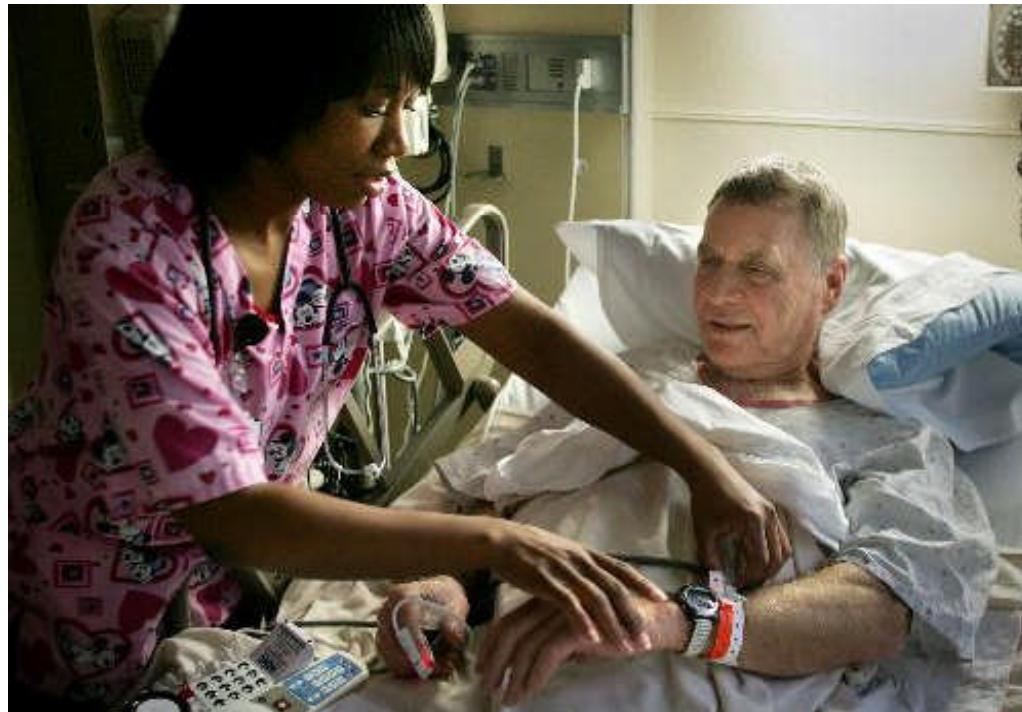
**GLOVES MUST BE WORN**

- Remove gloves after specimen collection is complete and sent to the lab
- After each collection, was your hands thoroughly with soap and water
- Sharps must be placed in the Sharps container



## General Guidelines for Phlebotomy

- Identify your patient with name and DOB and MR# on resource document



# Patient Identification

Match Lab slip to ID band and patients statement of name and DOB

- Name
- Medical Record #

002955256  
Leibman, David



# Lab Slip

Shows what test tube you need for the specimen requested:

- 4.5 mL
- Blue top
- PT/INR-H
- PTT-H

(H = Heparin)



# Lab Slip

Examples:

7.0 mL  
MT GRN  
Lytes

3.0 mL  
LAV TOP  
CBC





## Age Specific Considerations

### Adult patients: 3 strike rule

- PCA's may only attempt venipuncture **twice**.
- If the PCA is unable to obtain the specimen, notify the RN.
- If the RN is also unable to obtain the specimen after **one** venipuncture, the RN notifies the core Phlebotomy team or house staff.

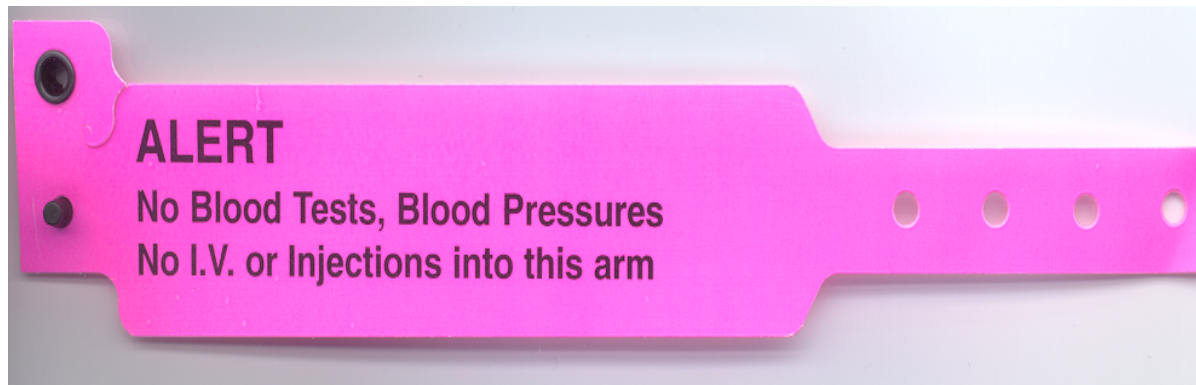
### Pediatric patients: 2 strike rule

- A pediatric patient may only receive a maximum of **two** venipunctures before the core Phlebotomy Team or house staff is called.



## Restrictions

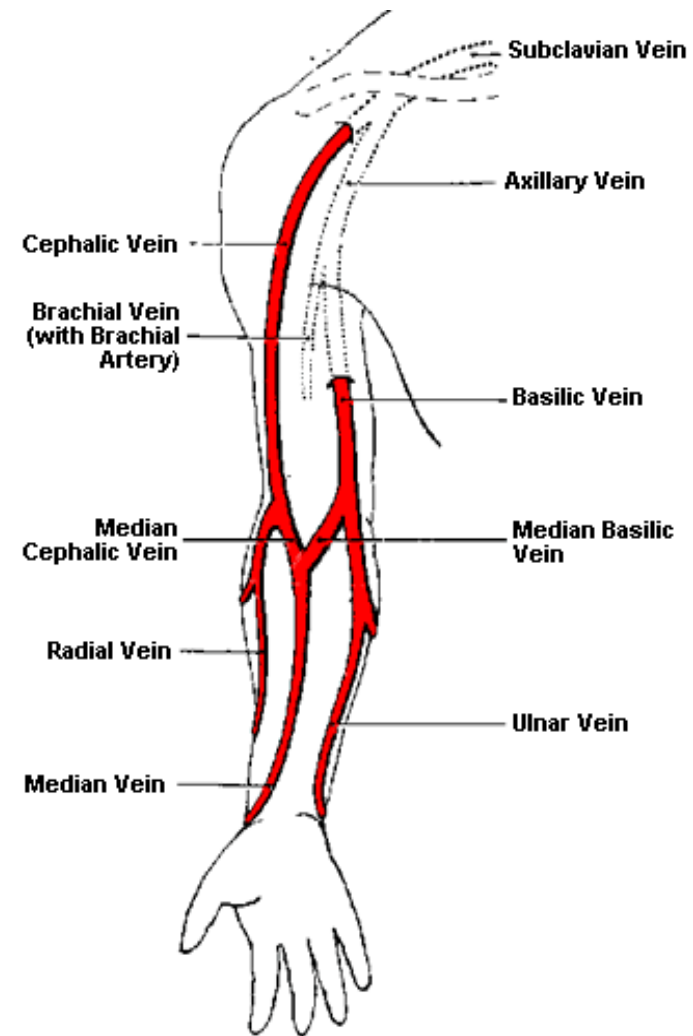
- **Do not** use arm for venipuncture if:
  - Fistula
  - Shunt
  - Amputation
  - Mastectomy



\*Note wrist  
band with limb  
restrictions

## Vein Selection

- Although the larger and fuller median cubital and cephalic veins of the arm are used most frequently, the basilic vein on the dorsum of the arm or dorsal hand veins are also acceptable for venipuncture.



Superficial veins of the right upper limb

## Vein Selection

Certain areas are to be **avoided** when choosing a site:

- Extensive scars from burns and surgery
- The upper extremity on the side of a previous mastectomy -restriction band
- Intravenous therapy (IV) / blood transfusions .
- Cannula/fistula/heparin lock .
- Edematous extremities



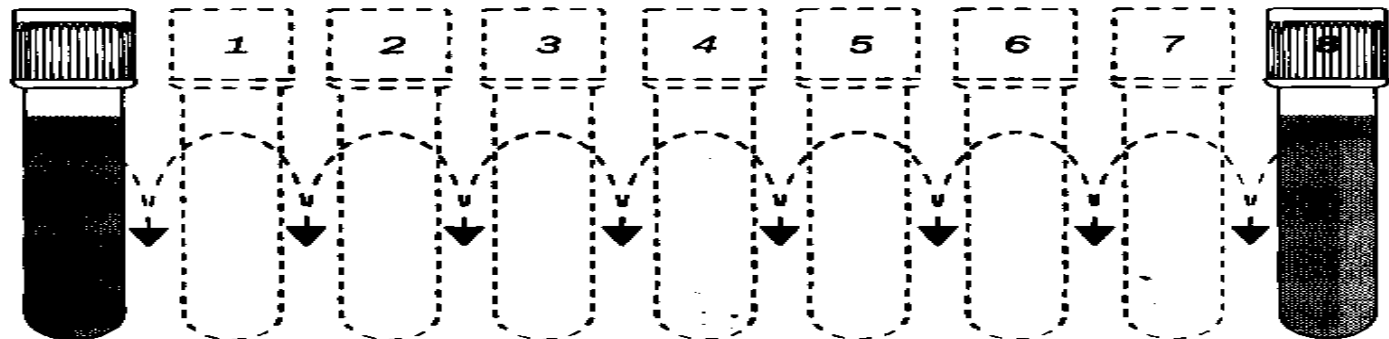
## Phlebotomy Procedure Video

[http://www.youtube.com/watch?v=\\_8ZsqXFqvQM](http://www.youtube.com/watch?v=_8ZsqXFqvQM)



# Always Mix Sample Tubes You Draw

**Invert the recommended number of times**



## WHY

- Each tube contains an additive or clot activator that needs to be mixed with the blood sample
- Anticoagulants such as EDTA need to be mixed to ensure the specimen does not clot

## HOW

- Holding tube upright, gently invert 180° and back
- Repeat movement as prescribed for each test

## WHEN

- Immediately after drawing

## CONSEQUENCES IF NOT MIXED

- EDTA tube will clot
- Gel tubes may not clot completely
- Specimen will often need to be redrawn



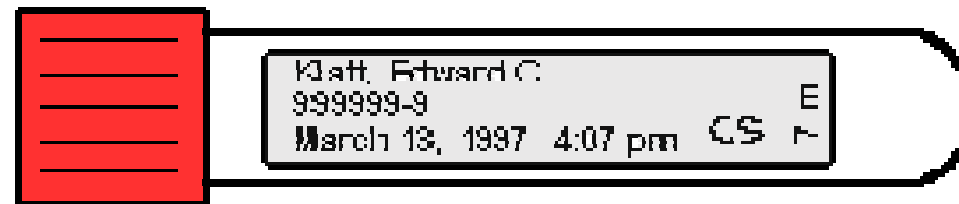
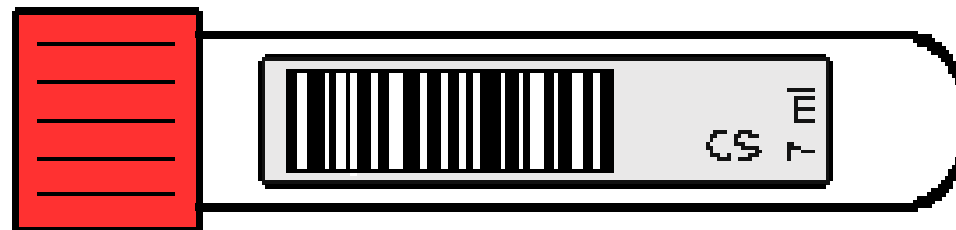
**BECTON  
DICKINSON**

8/98 VS5211-1

**VACUTAIN  
QUALITY  
MAKES THE  
DIFFERENCE**

# Placing Label on Test Tube

THIS WAY Left to Right 



## Order of Draw and Video

[http://www.youtube.com/watch?v=P5pcm9PuSDo&feature=player\\_embedded](http://www.youtube.com/watch?v=P5pcm9PuSDo&feature=player_embedded)

- Blood collection tubes must be drawn in a specific order to avoid cross-contamination of additives
  1. Blood Culture Bottles
  2. Blue
  3. Red
  4. Gold
  5. Green
  6. Pink
  7. Lavender
  8. Gray
  9. Other





## Troubleshooting Hints for Blood Collection

If a blood sample is not attainable:

- Reposition the needle.
- Ensure that the collection tube is completely pushed onto the back of the needle in the hub.
- Use another tube as vacuum may have been lost.
- Loosen the tourniquet.
- Probing is not recommended. In most cases, another puncture in a site below the first site is advised.

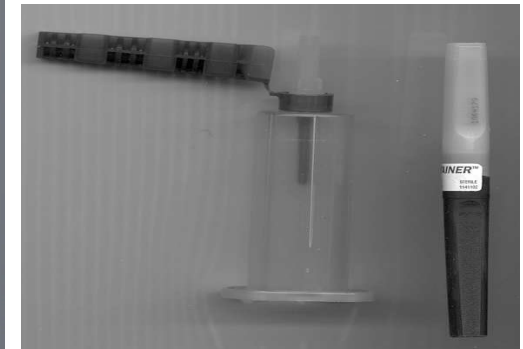
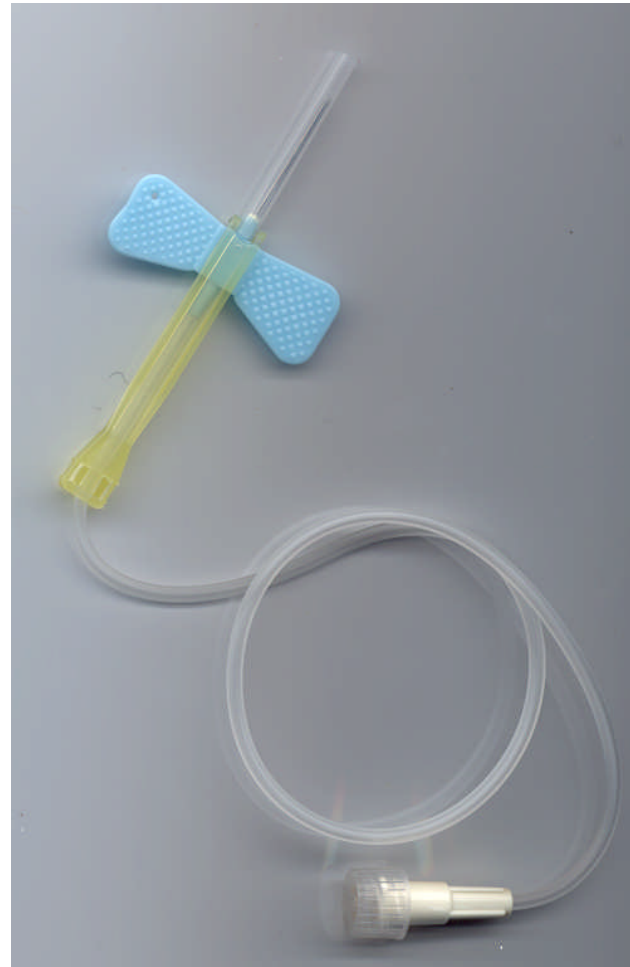


# Venipuncture with a Butterfly Needle

## Venipuncture w/ Butterfly Needle, Luer Adapter and Vacutainer

### Equipment:

- Gloves
- Tourniquet
- Alcohol swab
- 2x2 gauze pad
- Tape
- Vacutainer holder
- **Safety Butterfly Needle**
- **Luer Adapter**
- Test tubes



**Click here to watch a brief video on blood draw using a butterfly:**  
<http://www.wonderhowto.com/how-to-draw-blood-with-butterfly-method-235566/>

**Venipuncture w/ Butterfly Needle,  
Luer Adapter and Vacutainer**  
Special notes about using a butterfly:

- Hold wings of butterfly needle
- After you have obtained samples, remove butterfly needle by holding one of the wings
- Pull down the tubing
  - This will advance the butterfly needle into the yellow safety shield
  - You will hear it click when locked



## Special note: Order of the draw and Coagulation Studies when using a butterfly:

- If there is only one test requested, draw a discard tube first (a tube that you will waste)
- If the one test is a coag study (blue top) , then the discard tube must also be a blue top tube
  - Drawing the first sample and wasting it purges the air out of the butterfly tubing
  - If this is not done, air will fill the test tube
  - Blood sample will be QNS (Quantity Not Sufficient)



# Obtaining A Specimen By Fingerstick

## Fingersticks

- In the event a vein can not be accessed, a fingerstick may be done.
- The blood droplets are placed in a mini tube.



# Venipuncture for Type & Screen





## Type & Screen: Procedure

- Obtain completed Type and Screen form
- Match form to specimen requisition and ID band with patient statement of name, DOB- with a witness
- Match MRN on requisition to patient's ID band
- Sign name to form (both you & witness)
- Perform Venipuncture
- Peel off label from form
- Place label on to test tube at the bedside
- Send specimen to Blood Bank



# Type & Screen Form

**North Shore University Hospital**  
Manhasset, New York 11030

## ImmunoHematology P-15

Diagnosis \_\_\_\_\_ TXN Past 3 Months  Yes  No

# RBC Units Required \_\_\_\_\_ Does Patient have PreDonated  Autologous  Directed units?

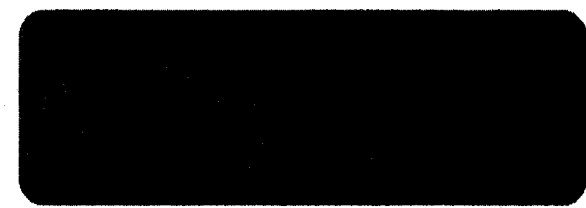
NAME	
ADDRESS	
ACCOUNT NO.	
PATIENT NO.	
PHYSICIAN	
AGE	SEX
WITNESS	DATE

Patient Identification verified prior to labeling of sample tube.

Specimen to be Handled As:  STAT (45 Min)  
 Urgent (3 Hours)  
 Routine (24 Hours)

Type of Specimen:  PreTransfusion (Type & Screen/Cross)  
 Pre-Op/PST Date Required \_\_\_\_/\_\_\_\_/\_\_\_\_  
 PreNatal/PST Date Required \_\_\_\_/\_\_\_\_/\_\_\_\_  
 PreNatal Routine Date of Del \_\_\_\_/\_\_\_\_/\_\_\_\_  
 Cord Blood  
 PUB (Percutaneous Umbilical Specimen)

Special Tests:  BMT Donor Testing  
 HLA Typing  ABC  DR  MLC/DNA  
 Other \_\_\_\_\_



## Type & Screen: Important Points

### Important points:

- Witness must be RN, NP, PA, or MD.
- Witness must be present for the patient identification as well as the blood draw!
- Failure to comply with identification procedure may lead to termination of employment.



# Blood Cultures

## Purpose

### Blood cultures

- Rule out or confirm septicemia &/or bacteremia.
- Should be drawn before the initiation of antimicrobial therapy.



## Equipment

- Blood culture kit
- Safety butterfly
- Vacutainer holder
- Vacutainer luer adapter
- Alcohol preps x 3
- Blood culture bottles

(1 set = 2 bottles)

- Aerobic (blue)
- Anaerobic



## Blood Culture Collection Kit

### Contains:

Gloves,  
tourniquet,  
chloroprep,  
alcohol wipes (3),  
gauze,  
band aid



## Special notes about Blood culture draws

- Key action with Chlorhexidine (Chloroprep) is FRICTION
  - Inoculate **aerobic (Blue top)** bottle first.
  - Inoculate **anaerobic (Red top)** bottle second.
    - If you inoculate in reverse order, the anaerobic sample will be contaminated
- ↓
- False results when analyzed in the lab
  - Dispose of butterfly needle and luer adapter with Vacutainer holder still attached into sharps container.
  - Place specimen label on each bottle.
  - Place label vertically so no part of bar code on bottle is covered.





## Special Considerations

### Sample requirements:

#### Adult

- Fill with 8-10 mL of blood (each bottle)

#### Pediatric (less than two years old)

- Fill with 1-3 mL of blood

\*Volume minimums must be adhered to!\*

- Blood cultures and coagulation tests should be collected by venipuncture
- Blood cultures are always drawn first in the order of multiple tubes (Order of the Draw)
- If two sets of blood cultures are ordered, they should be collected from two separate sites
  - No more than 30 minutes between each set.



# Contact Isolation

## **Drawing blood on patients on contact precautions**

### **PRIOR TO ENTERING ROOM:**

- Gather labels and equipment to be used, including a barrier (paper towel, washcloth, chux) PRIOR to washing hands and donning PPE.
- Perform hand hygiene.
- Don personal protective equipment (PPE).



## Drawing blood on patients on contact precautions

### UPON ENTRY TO ROOM:

- Place clean barrier on flat surface by patient bedside.
- Place the phlebotomy supplies on the barrier
- Place the wide open specimen bag on barrier



## Drawing blood on patients on contact precautions

After obtaining your specimen:

- DO NOT PLACE TUBE(S) ON OR NEAR SURFACE OF SPECIMEN BAG.
- Place tubes into specimen bag without touching outside of the bag
- After drawing blood for a type and cross, remove gloves, perform hand hygiene, reglove and sign label and requisition.
- Discard PPE in appropriate container.



## Drawing blood on patients on contact precautions

- Seal specimen collection bag without touching the inside of the bag.
- Pick up barrier from the top surface and discard in appropriate waste container.
- Send specimen to the lab



## After you have performed any venipuncture:

- Always label specimens at bedside!
- Place specimen into specimen bag
- Check site for swelling or hematoma
- Write time drawn and initials on demographic label
- Place demographic label in outside pocket of specimen bag
- Send specimen to Lab ASAP
- Document procedure and blood culture draw site (ie Left antecub) on progress note.



# QUESTIONS?

