Phlebotomy Safety for All Ages
Safety Measures for Phlebotomy

- Patient Identification
- Preparing Equipment and Supplies
- Preparing Patient
- Post Phlebotomy Care
- Safety tips for specific age groups
- Safety for the Phlebotomist
Patient Identification

– Use two identifiers each time a patient is drawn
– Patients should be actively involved. When able:
  • Ask the patient to verbally state and spell their last name
  • Ask the patient to state their date of birth
Correctly Identifying Patients

• For patients who are too young, cognitively impaired or do not speak the language
  – Ask a relative or friend to ID the patient by full name and date of birth
  – Compare the date with information on the request form, label or patient’s chart
Importance of Proper Patient Identification

• #1 Safety goal
• Must be done every time
• All discrepancies must be corrected before the patient is drawn
Equipment Selection

• Select equipment according to the patient’s veins
  – Use 21 gauge needles if possible as they will yield a better specimen
  – Use 22 or 23 gauge needles for small or fragile veins
  – Use syringes for smaller and fragile veins to put less pressure on the vein than vacutainer tubes
  – Use Butterfly needles only when necessary because they are the least safe, are expensive and may interfere with specimen integrity
Preparing the Equipment

• For patients younger than 6 years old have all the supplies ready and assembled before they are called into the room to prevent delays

• Child proof the area so no supplies are in reach of the child

• Always activate safety shields and dispose of all used equipment immediately after use

• Do not leave equipment or supplies on the exam table or in the room with the patient
Preparing the Patient

• Patients should not have anything in their mouths during the venipuncture procedure (except infants who may have a pacifier)

• Explain the procedure to the patient
  – In reassuring words they are able to understand
  – Keep them informed on how much longer it will be
Select a Safe Area for the Venipuncture Procedure

• Always have the patient lying or seated in a safe place
  – When available, patients should be in a chair with a locking arm for support and to prevent falls if the patient loses consciousness
  – Patients may be drawn while seated in a wheelchair if the wheels of the chair are locked
Safe Positions for Infants, Toddlers and Pre-Schoolers

• Most children under 6 years of age will need someone to hold their arm still
• Firm support from a co-worker while anchoring the vein is recommended
• Holding positions
  – Have the child lying down
  – Have the child sitting on someone’s lap
Site Selection

- The best veins to use are the median cubital or cephalic vein in the antecubital fossa of the arm.
- Use the basilic vein of the arm with care because of nerves and arteries in the area.
- Use the dorsal veins of the hand but do not use the veins in the underside of the wrist.
Safety for Fainting Patients

• If a patient states that they have fainted during a previous blood draw, have them lie down
• Never turn your back on a patient after completing the draw, some patients give no warning that they may faint
• Signs that a patient may be going to faint are pallor, perspiration, hyperventilation and/or anxiety
What to do when a patient faints

• Terminate the venipuncture immediately and secure the safety shield on the needle
• Prevent the patient from falling
• Call for assistance
• Lower patient’s head or elevate their feet
• Put a cold towel on their forehead
• Wave an alcohol pad past their nose to arouse them
• Have the patient slowly sip water
When a patient faints - Continued

• Have a Nurse or Doctor assess the patient
• If the patient stops breathing, call 911
• Do not allow the patient to leave the clinic or drive for at least 30 minutes
Post Phlebotomy Care

• Have the patient hold pressure on the site for 2 to 5 minutes while you mix and label the tubes (do not have them bend the arm at the elbow)
• Lift the gauze and observe the site for 10 seconds to look for bleeding or hematoma formation, especially those patients on anticoagulant therapy
• Apply tape, CoBan or CoFlex over the gauze
• Remind the patient or care-giver to remove the wrap after one-half hour
### Defining Age-Specific Groups

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Age Range</th>
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<tbody>
<tr>
<td>Neonate/Infant</td>
<td>0 to 1 year</td>
</tr>
<tr>
<td>Toddlers</td>
<td>1 to 3 years</td>
</tr>
<tr>
<td>Pre-School</td>
<td>3 to 5 years</td>
</tr>
<tr>
<td>School Age</td>
<td>6 to 12 years</td>
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<tr>
<td>Adolescent</td>
<td>13 to 18 years</td>
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<tr>
<td>Young Adult</td>
<td>19 to 35 years</td>
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<tr>
<td>Adulthood</td>
<td>36 to 65 years</td>
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<tr>
<td>Late Adult</td>
<td>65 +</td>
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</tbody>
</table>
Safety for Neonates/Infants

• Do not attempt a venipuncture if you cannot locate a vein, probing creates a risk of permanent nerve damage.
• Draw blood from the antecubital fossa or dorsal hand veins only
• Avoid veins in areas of edema, infection, bruising and deep veins
• Use a 23 gauge needle with a syringe or butterfly needle
Safety for Neonates/Infants cont.

• Blood from Children <12 months of age may be collected from the heel, with the 1st choice being from the lateral surface (little toe side) followed by the medial plantar surface (big toe side).
• The great toe is not to be used.
• The **maximum** depth of the incision is 2.0 mm.
• Pre-warming at 42 degrees C increases flow x7
# GUIDELINES FOR CAPILLARY PUNCTURE

<table>
<thead>
<tr>
<th>Age</th>
<th>Maximum depth</th>
<th>Site/type of puncture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premature infants or low birth weight</td>
<td>1.0 mm</td>
<td>Heelstick</td>
</tr>
<tr>
<td>Newborn to non-walking 12 months</td>
<td>2.0 mm</td>
<td>Heelstick</td>
</tr>
</tbody>
</table>
| Walking up to 12 months      | 1.0 mm for Fingerstick  
IMPORTANT: Use caution when performing fingersticks on infants. Outside skin to bone is very small. | Chubby fingers: Fingerstick  
Thin fingers: Venipuncture  
Thin fingers – use syringe with 23 G butterfly and draw the patient instead of performing a fingerstick |
| 12 months to 18 months       | 1.0 mm        | Fingerstick           |
| 18 months to 3 years         | 1.8 mm        | Fingerstick           |
| 3 years thru Adulthood       | 2.0 mm        | Fingerstick           |
Safety for Neonates/Infants cont.

- Use an incision device specifically designed for heelsticks such as Tenderfoot or Quicklet
- Do not perform heelsticks on infants <12 months of age who are walking
- Do not do fingersticks on infants <12 months old unless they have a chubby finger
- Collect only the minimum amount of blood necessary, check HML manual
Safety for Toddlers

- Finger puncture with lancet depth of puncture of 0.8 – 1.0 mm may be used on toddlers 12 – 18 months of age
- Use lancet with depth of puncture of 1.8 mm for toddlers 1.5 – 3 years of age
- Use the middle or ring finger
Safety for Toddlers cont.

- Never leave the child unattended
- The child may be very active so have someone assist you
- Band-aids should not be used, child may swallow and choke
Safety for Preschoolers

• Finger puncture with lancet depth of puncture no greater than 2.0 mm may be used on preschoolers 3 - 5 years of age
• Use the middle or ring finger of the non-dominant hand
• Punctures should be made across the fingerprint lines to ensure optimal blood flow
School Age 6 to 12 years

- Preferred collection is venipuncture in order to obtain the best specimen.
- Use the Anticubital Fossa
- Fingerstick from ring or middle finger
- May need good holding help for collecting blood samples when performing venipuncture
Safety for Adolescents

Teens and pre-teens are the most likely age group to faint during blood collection, especially if they have not recently had something to eat. Watch closely!
Safety for Geriatric Patients

• Select your equipment carefully, use smaller needles and syringes for fragile veins
• May need assistance if limbs must be manipulated or held still
• Anchor veins to prevent them from rolling
• Band-aids may not be appropriate for patients with “paper thin” skin
Safety for the Phlebotomist

• All patient and laboratory specimens are treated as infectious and handled according to “standard precautions”
• Use safety engineered equipment such as needles with safety guards, activate safety device immediately (push-button butterfly needles must be activated while the needle is still in the vein)
• Dispose of all used equipment immediately in a biohazard sharps container
Safety for the Phlebotomist cont.

- Always use a Blood Transfer Device to transfer blood from a syringe to a tube.
- NEVER directly stick needle into vacutainer tube to transfer blood; high risk for needle sticks during this process
- Use PPE (personal protective equipment)
  - Wear gloves for all venipuncture procedures
  - Change gloves between each patient
  - Wash or sanitize hands after removing gloves
References

- ASCP “Age-Specific Care in Phlebotomy, Terry Kotria, Austin Community College, 2007
- HealthEast Age-Specific Awareness Tool
- Davis, Bonnie K., Phlebotomy: A Client-Based Approach
• Print a copy of the Phlebotomy Safety for All Ages answer sheet found on the HML Website
• Answer the questions found on the following ten slides
• Answer KEY is available upon request, send email to: hmledu@healtheast.org
Question 1. Patient Identification Policy requires which of the following?

a. That the patient be actively involved if able.
b. That you must always use two forms of ID on each patient each time they are drawn.
c. Ask the patient to state their full name and date of birth.
d. Do not ask them questions they can answer with a yes or no.
e. All of the above.
Question 2. Safety requirements for taking blood from an infant requires which of the following?

a. Do not attempt a venipuncture if you cannot locate a vein.
b. Use a small gauge needle.
c. Draw a minimum amount of blood.
d. Have help in securing the patient.
e. All of the above.
Question 3. If a patient is sitting in the drawing chair and begins to display signs that they may faint, what would you do first?

a. Call for a Nurse to assess the patient.
b. Ask the patient to raise their feet.
c. Terminate the venipuncture and secure the needle.
d. Complete the venipuncture and put a cold towel on their forehead.
Question 4. When doing a venipuncture on an elderly patient, which of the following should not be used?

a. Select a small needle if the vein is small or fragile.
b. Anchor the veins to prevent them from rolling.
c. Slap the arm so the vein will “pop” up.
d. Ask for assistance for help to hold the arm still if they are unable to do so.
Question 5: Which process will help to keep the phlebotomist safe?

a. Use safety needles and activate the safety shield.
b. Wear gloves during the venipuncture procedure.
c. Dispose of sharps as soon as possible.
d. Use a Blood Transfer device to transfer blood from a syringe to a tube.
e. All of the above.
Question 6: Positive patient identification requires the following items

a. The patient should state their full name.
b. The patient should state their date of birth.
c. The patient should state their weight.
d. All of the above.
e. a. and b. above.
Question 7: Positive patient identification must be done every time a patient is drawn.

a. True

b. False
Question 8: The preferred specimen from a 11 month old infant who is walking is:

a. Heelstick
b. Fingerstick from ring or middle finger
c. Great toe stick
d. Venipuncture from the Anticubital fossa of child’s arm
Question 9: The preferred specimen from an 18 month old toddler is:

a. Heelstick
b. Fingerstick from ring or middle finger
c. Great toe stick
d. Venipuncture from the Anticubital fossa of child’s arm
e. b. or d. above
Question 10: The preferred specimen from a child 6 years of age is:

a. Heelstick
b. Fingerstick from ring or middle finger
c. Great toe stick
d. Venipuncture from the Anticubital fossa of child’s arm