Specimen Collection Best Practices

THE POWER OF LAB UTILIZATION

Quality Lab Results Begin at Collection

UK HealthCare

Quality Lab Results Begin at Collection

The quality of the test is only as good as the quality of the specimen analyzed.

Proper specimen collection is vital to the diagnosis, treatment, and monitoring of a patient's condition. The quality of the test is only as good as the quality of the specimen analyzed. The specimen may be obtained via venipuncture with either a sterile needle with a Vacutainer or through the use of a butterfly needle. In difficult patients, the utilization of a capillary sample may be necessary. In young infants, a heel stick may be done. To assure this expertise is achieved and maintained in the best interest of our patients, the following training model and best practices must be followed.

Training Model:

1. **Classroom Education & Instruction –** Training will include basic overview of Phlebotomy Best Practices, Procedure Review, Understanding Specimen Quality & Labeling, Educational Tools & Discussion.
2. **Hands-on Training & Individual Assessment –** Training will include an individual assessment to gauge current level of skill and hands-on instruction utilizing the material from the classroom training.
3. **Competency Skill Assessment –** After training is completed, trainee will complete written and performance based competency assessments to ensure the trainee's understanding of the course material and their ability to successfully perform a venipuncture. Competency Skill Assessment will be conducted annually after initial training.

UK HealthCare

Specimen Collection Training Objectives:

- ❑Increase Patient Safety & Satisfaction
- ❑Increase Competency in Phlebotomy Best Practices
- ❑Reduce Number of Redrawn Specimens
- ❑Increase Efficiency & Utilization of Resources

Increase Patient Safety & Satisfaction

Specimen Recollects can be avoided by following phlebotomy best practices. When testing cannot be performed due to poor specimen quality, the patient's care can be delayed while clinicians repeat the pre-analytic process. Diagnostic decision making can be stalled while awaiting the results of the recollect, which could potentially increase the patient's length of stay.

Pre-Analytic Process

Ordering Laboratory Testing

Epic Order	Paper Requisition

Patient Identification

Scanning Patient	Asking Patient for Name & DOB	Verifying armband & Labels

Collection

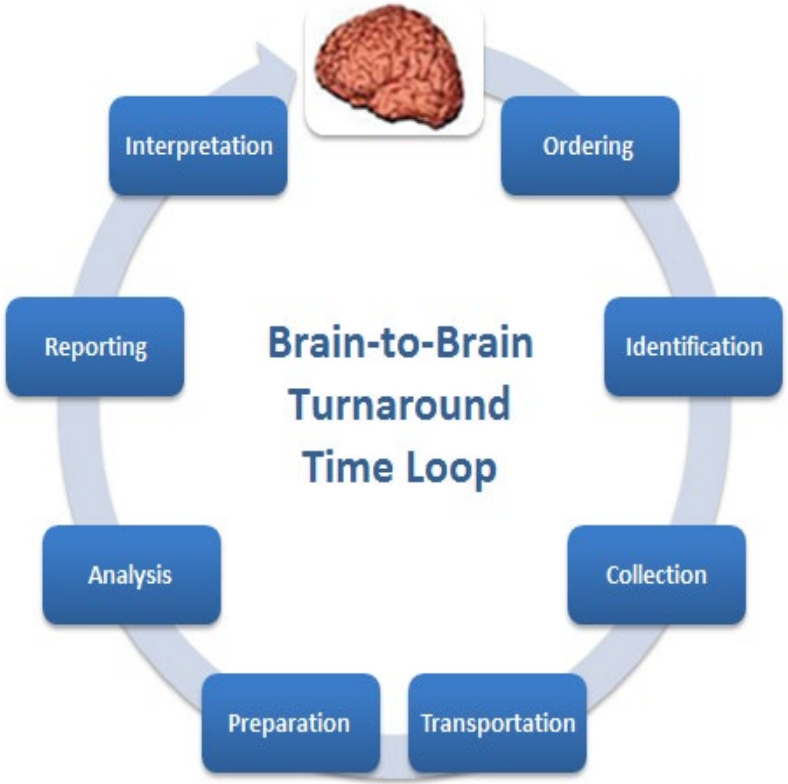
Preparing for Collection	Performing the Collection & Labeling	Scanning **ALL** Labels

Transportation to Clinical Laboratory

Pneumatic Tube System/Robots	Hand-delivered to the Clinical Laboratory

Locations may need to prepare the sample prior to transport based on specimen stability

9 Steps in Performance of Any Laboratory Test



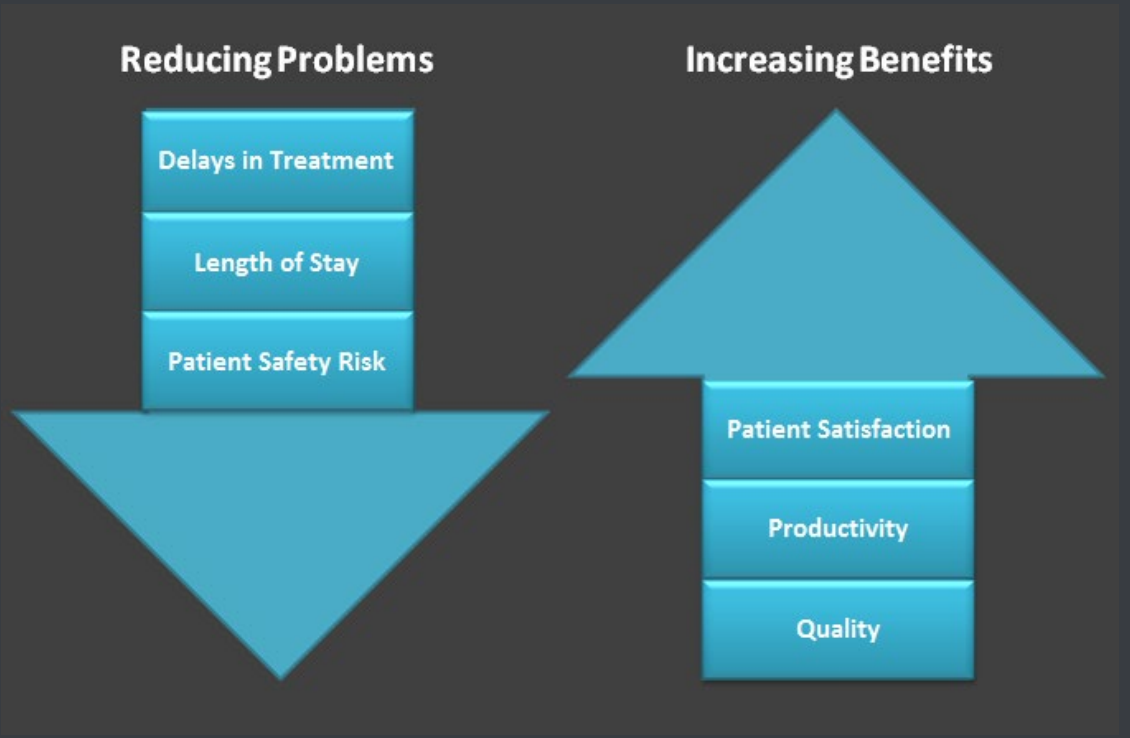
UK HealthCare

Reducing Recollects

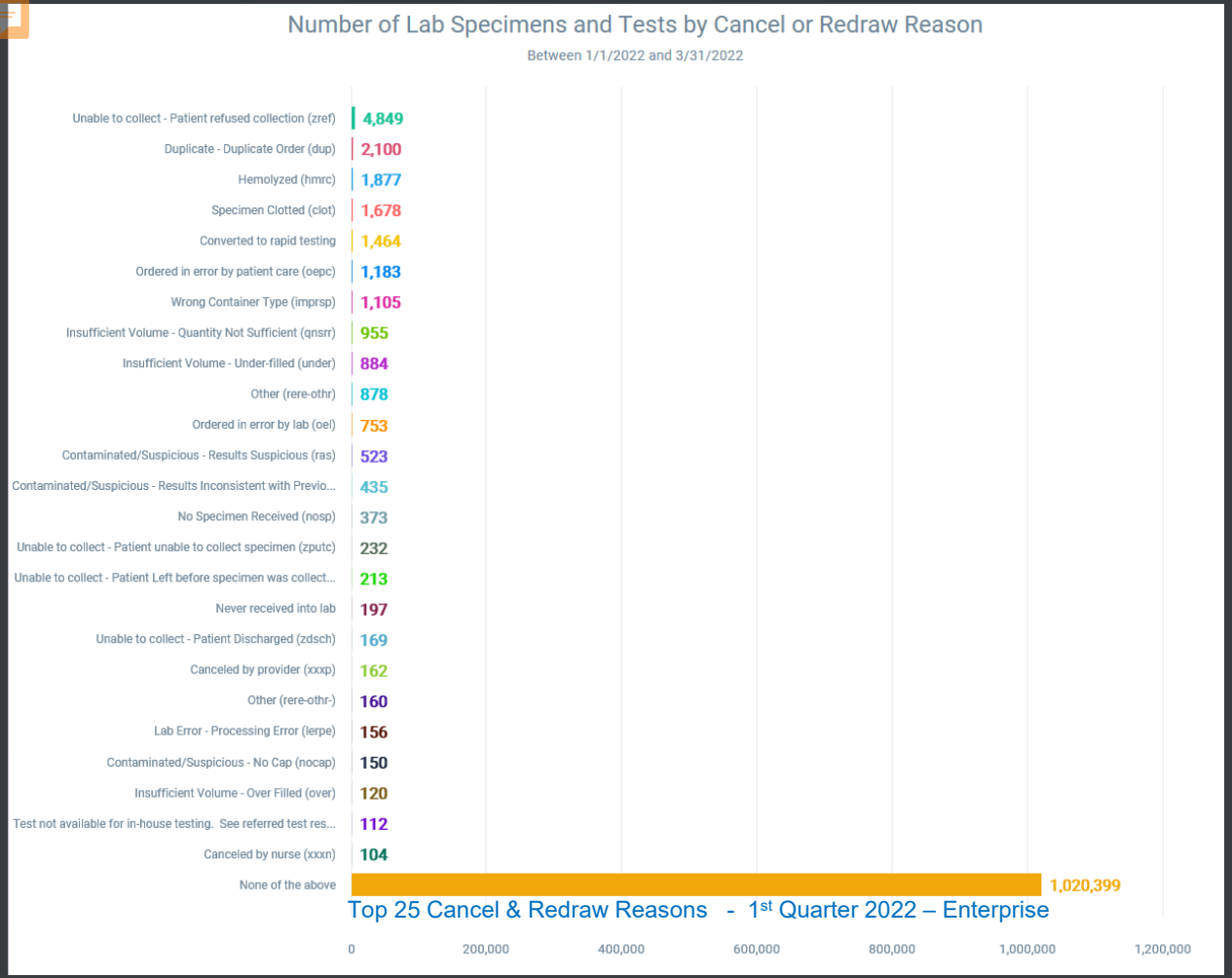
Lab Utilization Initiative Eliminating Waste

Recollects not only delay patient care, which can increase length of stay, but also cause unnecessary waste of variable supplies and human resources. Recollects cost the Enterprise.

$$$$$



HealthCare



Top 10 Collection Issues

Hemolyzed (hmrc)	1,877
Specimen Clotted (clot)	1,678
Wrong Container Type (imprsp)	1,105
Insufficient Volume - Quantity Not Sufficient (qnsrr)	955
Insufficient Volume - Under-filled (under)	884
Contaminated/Suspicious - Results Suspicious (ras)	523
Contaminated/Suspicious - Results Inconsistent with Previous	435
No Specimen Received (nosp)	373
Contaminated/Suspicious - No Cap (nocap)	150
Insufficient Volume - Over Filled (over)	120

Many of the collection issues requiring redraw can typically be prevented by the collector.

The collection techniques utilized directly impact the quality of the specimen collected. The next few slides will provide additional details for preventing some of our most common collection issues.

UK HealthCare

#1 Reason for Redrawn Specimens – Hemolysis

Hemolysis is the rupturing of red blood cells and the release of their contents into the surrounding fluid. **Hemolysis has the potential to render all test results unreliable causing avoidable delays in patient care.** Collection technique is most often the cause of hemolysis. Venipuncture with a vacutainer system is the best practice for avoiding hemolysis.

- ❑ Use 21 Gauge Needle or larger
- ❑ Allow the alcohol to dry thoroughly
- ❑ G*ently* invert 8-10 times. Forcefully shaking will cause hemolysis.
- ❑ Angling the collection container so the blood hits the wall of the container rather than the bottom will minimize the risk of hemolysis.
- ❑ Needle placement, bevel up
- ❑ Place the tourniquet 3 to 4 inches above the venipuncture site.

- ❑ Collecting blood with an IV start can increase the chance of hemolysis by 25%.
- ❑ Small needles increase the risk
- ❑ Leaving a tourniquet on for more than 1 minute causes hemolysis.
- ❑ Putting too much pressure on the vein from the vacutainer container or syringe, or too much pressure when transferring blood from the syringe to container increases risk
- ❑ Needle placement, bevel up against the cell wall will cause hemolysis.

Non-Hemolyzed **Hemolyzed**

UK HealthCare

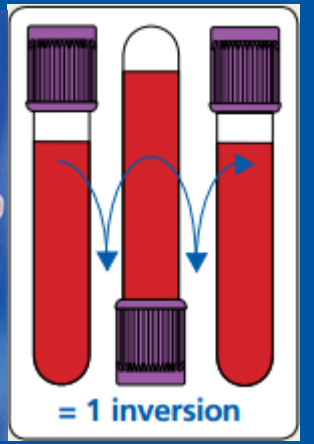
#2 Reason for Redrawn Specimens – Clotted Specimens

A clotted specimen is the most common reason for a specimen to be recollected at our Institution. Clotting is the process in which blood changes from a liquid to a gel. A clotted specimen can easily be prevented by ensuring adequate tube inversion or mixing.

Preventing Clotted Specimens

- ❑ A specimen must be gently inverted 8-10 times to ensure the blood has thoroughly mixed with the additive in the tube, which helps to prevent clotting.
- ❑ Never vigorously shake the specimen, as this can cause damage to the cells, causing hemolysis.
- ❑ Specimens collected with a syringe and transferred to appropriate containers have a high chance of clotting due to not being immediately mixed with the additive that prevents clotting.
- ❑ Blue, Green, Lavender, Purple, Gray, & Blood Gas Syringes are the most common recollected containers due to clotting.
- ❑ Don't be alarmed, Gold, Orange & Red containers should clot. Mixing the blood thoroughly with the additive, which is a clot activator, will allow the clotting to occur more rapidly, which is required for centrifugation and testing.
- ❑ Don't remove needle prior to disengaging the vacutainer.

Roll syringe between palms for at least 5 seconds



Holding tube upright, gently invert 180° and back

HealthCare

Clotted Specimens Continued

The best practice is to utilize a vacutainer collection system, but sometimes nursing may need to utilize a **plain** syringe and then transfer to the appropriate containers. Specimens collected with a syringe and transferred to appropriate containers have a higher chance of clotting due to not being immediately mixed with the additive that prevents clotting. Best practice is to use a transfer device and buddy system.

Preventing Clotted Specimens – Syringe Transfers

- ❑ Plain syringe only
- ❑ Low volume syringe(s); may need multiple syringes depending on volume of blood needed for testing.
- ❑ No blunt needles
- ❑ Must use transfer device
- ❑ Syringe must be immediately handed to buddy to transfer and invert in the appropriate containers
- ❑ Do not force the plunger while transferring as that can cause hemolysis

#3 Reason for Redrawn Specimens – Wrong Container Type

Wrong container type collections can easily be prevented by paying close attention to the collection window features within Epic Hyperspace. Failure to collect the appropriate amount of requested containers or collecting the wrong container type could result in the specimens having to be redrawn.

Based on the Collection Sequence shown, the collector will need to gather their necessary supplies, and should be ready to obtain the following containers amount of containers in the following order:

- 4 Blue containers
- 1 Red container
- 1 Green – PST
- 1 Dark Green – NaHep
- 2 Lavender
- 1 Pearl – PPT
- 4 Yellow – ACD-A

Total: **14 Containers**

Always allow each container to fill to the fill-line.

Collection Sequence

x4 Blue
Protime-INR
ADAMTS13 Activity
Platelet function test

Red
Gentamicin level, random

Green
Comprehensive metabolic panel

Dk Grn (NaHep)
Chromosome Karyotype, Constitutional

x2 Lavender
CBC W/O Differential
Ammonia

Pearl
BK Virus Quantitative DNA PCR

x4 Yellow
HLA Crossmatch, Donor (HLAXMD)
HLA B27 Typing

- ❑ Always collect the amount of containers listed as the system will consolidate the total tests selected based on volume that is required for testing to be performed.
- ❑ Always collect the containers in the order of draw listed under the Collection Sequence.
- ❑ Labels will print based on the amount of containers needed to perform the testing requested.
- ❑ Each label indicates the container required, and should be labeled appropriately by matching the color/container listed on the label to its corresponding container.

Anatomy of a Label

UK HealthCare

#4 Reason for Redrawn Specimens – Insufficient Volume

Insufficient Volume includes all specimen types that are not filled appropriately for testing to be performed. This could be containers that were under-filled, over-filled, not-filled or could be that there was not enough specimen volume sent to perform all testing requested.

Preventing Insufficient Volume

- ❑ Always make sure to pay close attention to the fill-line on each container. Each container has an intended fill volume. This is the volume of blood that needs to be added to the additive within the container to produce the best results.
- ❑ The best practice is to utilize a vacutainer collection system, and allow the containers to fill to the fill-line.
- ❑ If using a butterfly needle, make sure to, "Take the Time to Clear the Line," utilizing a waste tube to ensure that the air is removed from the line. This is the biggest contributor to rejected short blue samples needed for coagulation testing. If you do not clear the line, your specimen container will fill half with air and testing will not be performed.
- ❑ Many orders are built to print a label based on the volume required for testing. The number of containers requested for testing is based on each container being filled to the fill-line. If two labels print, two containers adequately filled to the fill-line should be sent to ensure there is enough volume to perform all testing requested.

Look for the fill-line on specimen containers

HealthCare

#5 Reasons for Redrawn Specimens – Contamination

Contamination is the act of making something impure or unsuitable by contact with something harmful or undesirable. It encompasses many different rejection reasons in relation to specimen collection.

Preventing Contamination

- ❑ IV Contamination is a common reason for a recollect being requested due to suspected contamination. It is always the best practice to select a collection site on the opposite side from an IV. If that isn't possible, the patient should always be drawn below the IV site and IV Access guidelines and restrictions should be followed.
- ❑ In relation to a blood gas specimen, air exposure can be the contaminant. A syringe received with an air bubble present or without a cap will be rejected due to air contamination.
- ❑ Order of Draw is extremely important to prevent cross-contamination from the additives in the specimen containers. Cross-contamination can cause incorrect results, which can harm patients.
- ❑ Leaking or open specimens could be rejected due to contamination if the testing being performed requires sterility. This is very common with cultures and other microbiology tests where sterility must be maintained to produce an accurate test result.
- ❑ Once blood is in the appropriate container, do not remove the cap or pour from one container to another

UK HealthCare

Routine Phlebotomy Procedure

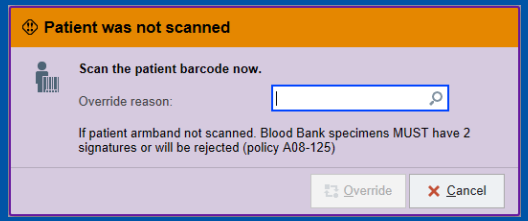
Preparing to scan the patient's armband to positively identify the patient, while explaining the blood collection process.

1. Verify orders requested via Epic and/or paper requisition.
2. Gather/prepare necessary supplies. Bring straight & butterfly needles, as needle selection is dependent on the size and site of the vein.
3. Positively identify the patient by verifying name and MRN/DOB against patient armband, Epic Patient Storyboard, and printed labels.
4. Perform hand hygiene & use appropriate standard precautions and PPE.
5. Use effective and age appropriate communication with patient and family.
6. Position Patient.
7. Apply tourniquet, check veins, and select site.
8. Clean site appropriately.
9. Anchor vein and stick.
10. Collect tubes utilizing order of draw, while exchanging tubes, and inverting.
11. Release tourniquet.
12. Disengage vacuum.
13. Remove needle.
14. Apply pressure.
15. Check for bruising, swelling, or discomfort.
16. Ensure patient is not bleeding from venipuncture site.
17. Apply bandage.
18. Label each container appropriately and prior to scanning to ensure all containers are collected and accounted for.
19. Scan each container collected to document the collection date, time & collector, and click on receive/accept to complete the collection process.
20. Communicate to patient prior to leaving.
21. Hand hygiene upon leaving.

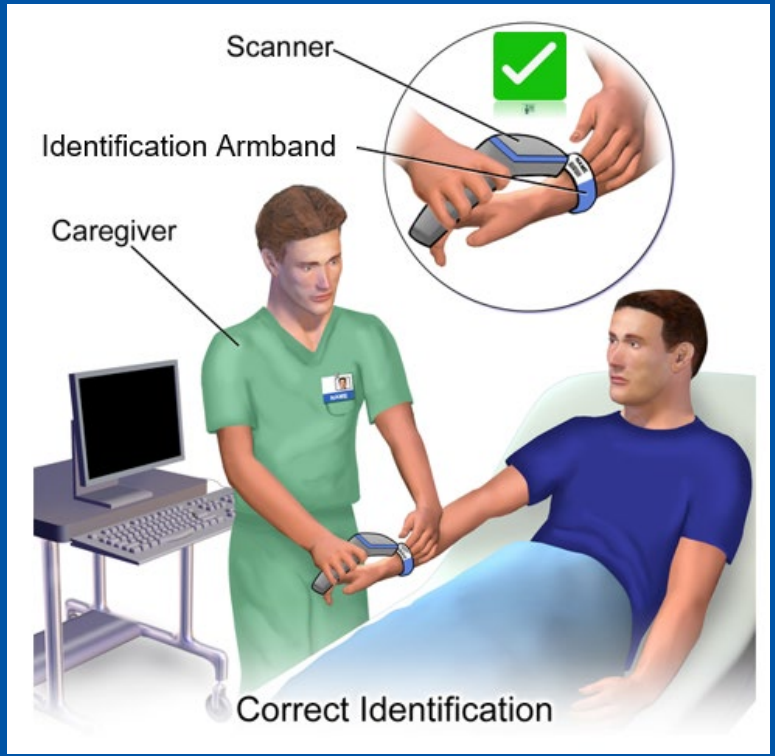
Positive Patient Identification - PPID

One of the most important first steps when preparing to collect a specimen is positively identifying the patient.

- Correctly identify each patient using two unique identifiers (Name & DOB)
- Ask the patient to state their name and date of birth, if able.
- Each patient must have a barcoded ID armband if an inpatient or an outpatient require a Blood Bank collection.
- Scan the barcode on the armband, and compare the patient's ID armband to the information provided on the Epic Patient Storyboard. If armband and barcoded label is not scanned appropriately to collect and label a Blood Bank specimen, then the specimen label must be signed by the collector and a second verifier.



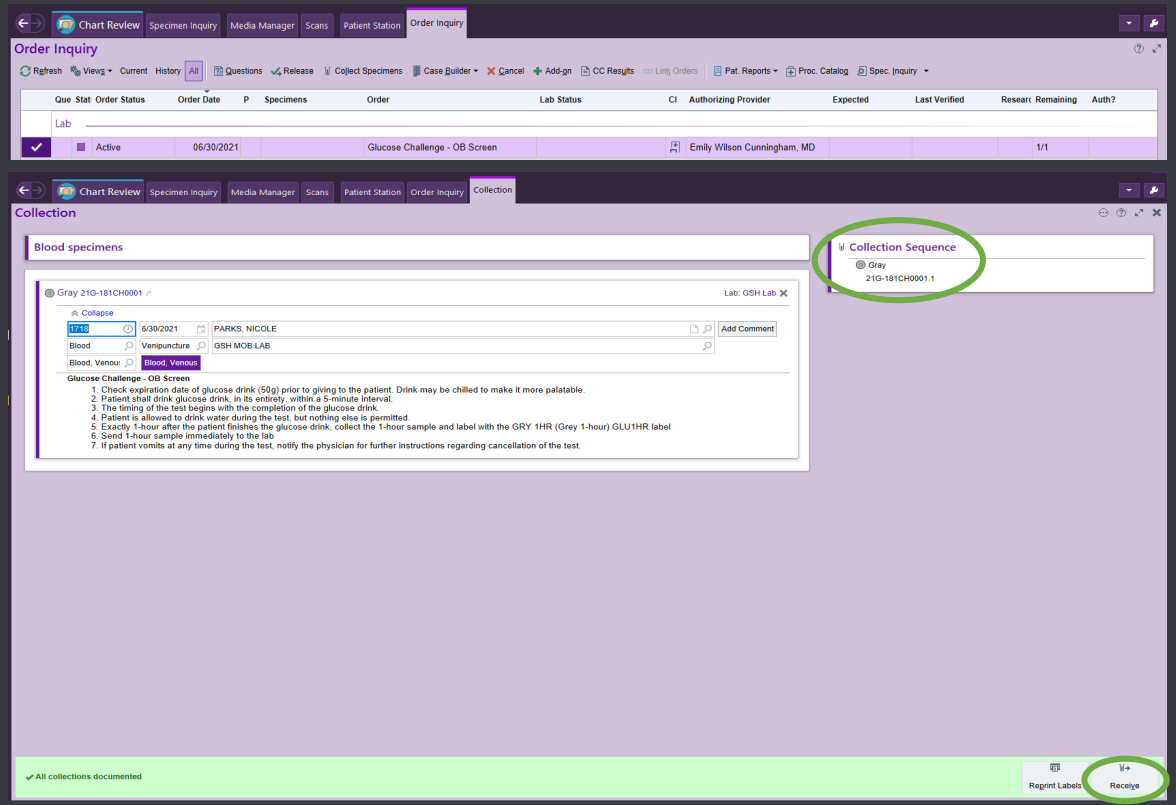
- Specimens must be appropriately labeled in the presence of the patient at the time of collection. **Preprinting labels for future use is strictly prohibited as it is a patient safety risk. Labels should only be printed at the time of collection.**
- Scanning each container or clicking the hyperlink for each container, will ensure the label includes all mandatory information, including updating the collection date & time electronically.
- Just printing the label does not update the collection date & time electronically.
- Armband & Collection update scanning non-compliance is monitored & reported.



UK HealthCare

Specimen Collection via Epic Hyperspace

- ❑ Available orders can be found under the Order Inquiry tab via the Patient Station encounter.
- ❑ Highlight to select the test(s) that needs to be collected, and click on Collect Specimens.
- ❑ After verifying patient identification, collect the total amount of specimen(s) listed in the order of draw under the Collection Sequence .
- ❑ Print the labels, verifying patient identification on the printed label against the already verified patient identification on the Patient's Storyboard.
- ❑ Label each container appropriately and prior to scanning to ensure all containers are collected and accounted for.
- ❑ Scan each container collected to document the collection date, time and collector.
- ❑ Once all containers have been scanned, denoted by the green banner at the bottom of the screen, click on the receive/accept button to complete the collection process.



HealthCare

Specimen Label & Labeling Requirements

Specimen must be appropriately labeled in the presence of the patient at the time of collection by the person collecting or assisting with collection of the specimen. Labels are a critical aspect of specimen workflow, providing patient identification while electronically linking a specific specimen with a specific collection time to ensure accurate result reporting for the patient's care.

Anatomy of a Label

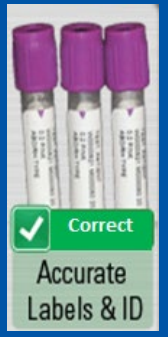
- ❑ The label should be aligned utilizing the notched label feature, so that the large barcode label is aligned the length of the container and leaving a viewable window to see the specimen volume.
- ❑ The label should be wrapped smoothly against the container, without wrinkles, for easy scanning.
- ❑ Always ensure each label is scanned at collection to update the collection date & time.

Label should NEVER be:

Winged

Flagged

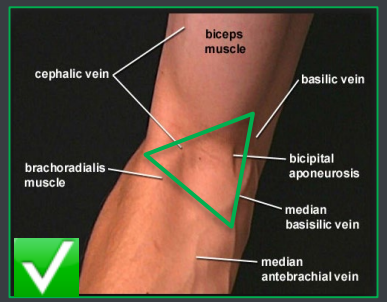
Wrinkled



HealthCare

Access on Patients

Proper specimen collection is vital to the diagnosis, treatment, and monitoring of a patient's condition. The quality of the test is only as good as the quality of the specimen analyzed. The specimen may be obtained via venipuncture with either a sterile straight needle with a Vacutainer or through the use of a butterfly needle.



Restricted Access:

- A patient may never be drawn by peripheral stick on an arm with a PICC line, dialysis shunt or fistula, or any other mechanical device.
- Never draw from an arm with a blood clot/deep vein thrombosis (DVT).
- Never draw from the arm on the surgical side of a patient who has had a lumpectomy or mastectomy.

IV Access:

1. It is always the best practice to select a site on the opposite side from an IV. If that isn't possible, the patient should always be drawn below the IV site.
2. IV should always be turned off for two minutes by a nurse prior to drawing 5mL of waste blood to prevent IV contamination. Contaminated specimens will be rejected, and a recollect requested.
3. Tourniquet should never be tied above an active IV site.

Applying the Tourniquet

The tourniquet serves two functions in the venipuncture procedure by causing blood to accumulate in the veins.

① allowing veins to be located easier
② providing a larger amount of blood for collection.

1. Place the tourniquet 3 to 4 inches above the venipuncture site.
2. Grasp both sides of the tourniquet near the patient's arm and while maintaining tension, the left side is tucked under the right side. The loop formed should always face down.
3. The free ends of the tourniquet must be pointed away from the site to avoid contamination and to allow for easy release.

The maximum time a tourniquet should remain in place is 1 minute.

- tourniquet may need to be applied twice during the venipuncture procedure; once when the vein selection is being made and immediately before the venipuncture is performed. (If two applications of the tourniquet are necessary, then the tourniquet should be released for two minutes before the puncture is performed.)
- The tourniquet should be released as soon as blood begins to flow into the tube to prevent hemoconcentration and hemolysis.
- Always use a fresh tourniquet with each patient and discard at the end of the collection in the trash.

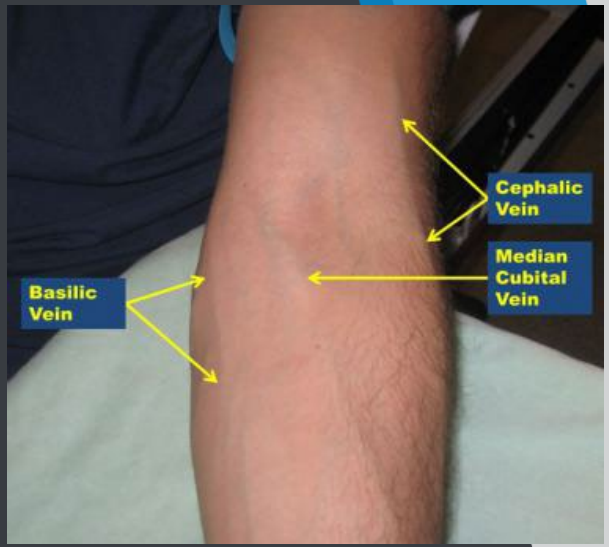
Vein Selection for Venipuncture

The preferred site is the antecubital fossa region located anterior to the elbow, which includes the most common superficial veins:

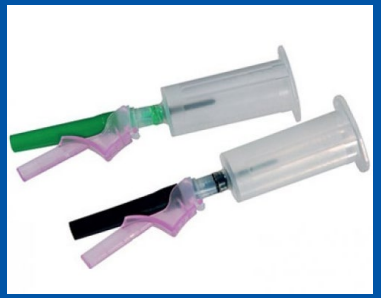
- Cephalic
- Basilic
- Median Cubital

The ability to feel a vein is much more important than the ability to see the vein. Select a vein that is easy to palpate and large enough to support good blood flow.

1. Apply tourniquet and instruct patient to make fist (Do not vigorously pump fist).
2. Palpate vein with index finger to determine depth, direction, and diameter of vein to aid in directing the needle during insertion.
3. Gently rotate arm to gain better access
4. Do not use veins in back of wrist



Selecting a Needle



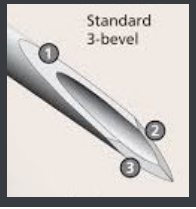
PREFERRED:
Straight Needle with one-time use hub

or

21G Butterfly Needle

Differences When Utilizing a Butterfly Needle:

1. A waste tube must be used to clear the air from the line. Always remember, **"Take the Time to Clear the Line!"**
2. Tube Inversions/Mixing can be done as the tube is filling instead of after removed from the hub.
3. Safety Device slides instead of clicking.



Always Inspect the bevel of the needle to ensure it is not damaged. Do not contaminate the needle during inspection.

UK HealthCare

Cleansing the Collection Site

Sterile technique should always be maintained to protect the patient and the collector. **Never** use a needle with a broken seal. **Never** touch the needle to anything once the protective cover is removed until it punctures the skin. All new needles and all evacuated tubes are sterile**. Never** reuse alcohol pads; these are used to cleanse the site of puncture unless blood culture bottles are collected. Alcohol destroys some bacteria that are present, but rubbing with the pads removes many skin organisms.

Never touch the venipuncture site after cleansing. Do not blow or blot dry. Always allow the alcohol to dry unassisted. Be sure to allow adequate time for the alcohol to evaporate to avoid hemolysis. **Never wipe the cleansed area with gauze to assist in drying the area, this contributes to contamination. Never reuse a needle. If blood is not obtained, use a new needle for the second venipuncture.** Engage all safety devices on needles and discard appropriately in sharps containers. Never tear off the finger of a glove to palpate a vein.

- **Isopropyl Alcohol**
  - General Phlebotomy use.
  - Allow adequate time for the alcohol to evaporate to avoid hemolysis.
- **Iodine**
  - Used when checking blood alcohol level.
  - Always verify patient isn't allergic.
- **ChloraPrep (Chlorhexidine Gluconate)**
  - Used when collecting Blood Cultures
  - Should not be used on patients under two months of age. Use iodine instead.
  - Do not use if patient has known allergy to alcohol or chlorhexidine

A. Proper insertion technique allows blood to flow freely into the needle.

B. Bevel on vein's upper wall, doesn't allow blood to flow.

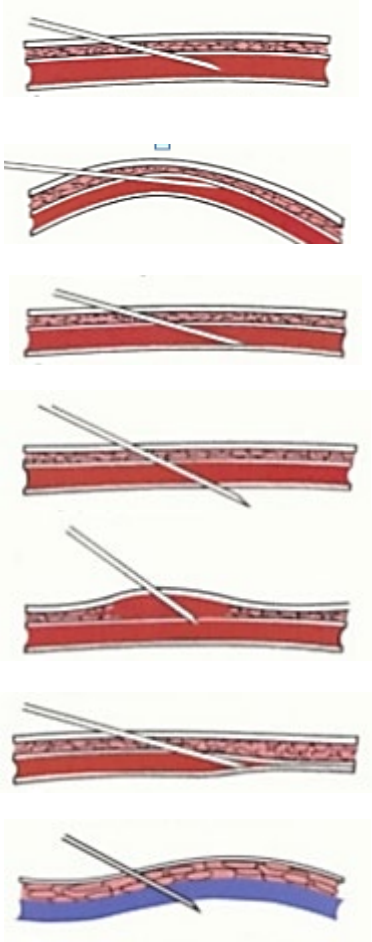
C. Bevel on vein's lower wall, doesn't allow blood to flow.

D. Needle inserted through the vein, can cause hematoma.

E. Needle partially inserted, causing hematoma as blood leaks into the tissue

F. Collapsed vein

G. When vein rolls, the needle can slip to the side without penetrating the vein.

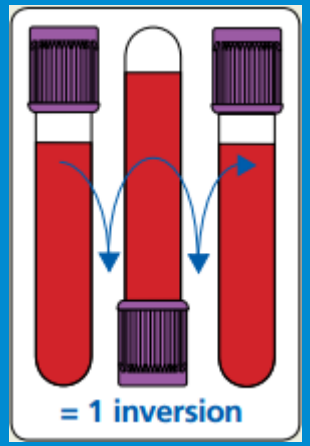


Performing the Venipuncture

1. Remove the needle cap carefully so as not to touch anything that would contaminate it.
2. Hold the needle assembly (hub, evacuated tube and needle) in one hand while the thumb of the other hand anchors the vein 1 to 2 inches below puncture site.
3. Position the needle with the bevel side up, so that the needle is running parallel to the vein.
4. Insert the needle quickly, with the bevel side up at a 15-30° angle with the skin. A slight pop and ease should be felt as the needle enters the vein.
5. Press the first evacuated tube onto the sheathed needle (see Order of Draw). Blood should begin to flow at this point. If it does not flow, palpate gently above the puncture to feel the direction of the vein and possibly reorient the needle slightly. Do not probe.
6. Allow blood to flow into the tube until it stops so that proper dilution of blood to additive can occur.

UK HealthCare

Performing the Venipuncture – Tube Exchanging & Inversion



How to Invert?

Holding tube upright, gently invert 180° and back.

Why Invert?

- Most tubes contain an additive or clot activator that needs to be mixed with the blood sample without causing damage to the cells.
- Tubes with anticoagulants (blue, green, lavender, purple, gray) need to be mixed to ensure the specimen does not clot.

Consequence of NOT inverting:

- **Tubes with anticoagulants will clot.**
- **Tubes with clot activator (gold, orange & red) may not clot completely causing delays or recollect.**
- **Specimens will often require a recollection.**

If multiple tubes need to be collected, remove each tube from the Vacutainer hub with a gentle twist-and-pull motion and replace it with the next tube. (see Order of Draw). During the tube exchange, be mindful of these key issues:

- Hold the needle apparatus firmly and motionlessly so that the needle remains comfortable and in the vein during the tube exchanges.
- Follow the correct Order of Draw. Remember to gently invert the removed tubes **8-10 times** to ensure blood is adequately mixed with additive. Do not shake, this can damage the cells. Inversion can be done with one hand while waiting for another tube to fill.
- Once blood flow begins, the tourniquet should be released as soon as possible, but keep in mind the number of tubes being collected.

UK HealthCare

Vacutainer Collections

Collection Sequence

- Blood Culture Vials

Isolator Microbial Tube 10ML

- Lt Blue Top-Citrate - Blue
- Red Top
- Royal Blue Plain - Dkblser
- Sst - Gold
- Green Pst Li Hep
- TB Nil - Grey
- TB Ag1 - Green
- TB Ag2 - Yellow
- TB Mitogen - Lav
- Clear Green, Lihep - No Gel
- Green Top- Nahep - Dark Green
- Purple Top-EDTA - Lavender
- K+Edta 4Ml - Dark Purple
- Pink Top-Kedta
- Tan Top- Lead Kedta
- Royal Blue Edta - Dkbledt

Ppt - Pearl

- Grey Top- Na Flouride - Gray
- Pale Yellow (Acd-A)

Required Scanning

- Patient armband should always be scanned during the collection process when prompted.
- Always scan EVERY labeled container at collection AND click on accept/finish/receive button to ensure the collection date & time is documented in Epic.
- Blood Bank samples will be rejected if armband scanning & collection update scanning does not occur.

Epic Collection Label

Required Label Alignment

- The label should be aligned by the notch, so the large barcode label is aligned the length of the container, leaving a viewable window to examine the specimen.
- The label should be wrapped smoothly against the container, without wrinkles, to allow for scanning.

Microtainer Collections

Collection Sequence

- Pediatric Blood Culture Vial

Isolator Microbial Tube 1.5 ML Pediatric

- Pediatric Purple- Edta
- Pediatric Pst
- Pediatric Green NaHep Dark Green
- Pediatric Lt Blue- Citrate
- Pediatric Red

Filter Paper

HealthCare

Order of Draw is extremely important to prevent cross-contamination from the additives in each container. Cross-contamination can cause incorrect results, which can harm patients. Sample should **NEVER** be poured from one container to another as this can cause inaccurate results.

Example: A lavender tube is collected *incorrectly* before a green tube. The lavender tube has an anticoagulant additive that includes potassium. If collected before the green top, the green top could be contaminated with potassium, causing a higher potassium result than the patient actually has.

Helpful Hint:

When using a butterfly for a venipuncture, a waste tube (blue top tube) should be collected first in the Order of Draw to remove the air from the tubing to prevent under-filled tubes and redraws.

HealthCare

Summary

Phlebotomy Best Practices must be followed in order to provide a quality specimen that meets Laboratory testing requirements.

Overview of Topics to be Discussed:

- ❑ Routine Phlebotomy Procedure
- ❑ Preparing for Collection/Venipuncture
- ❑ Positive Patient Identification & Collection Manager
- ❑ Access on Patient
- ❑ Proper Tourniquet Placement & Tying
- ❑ Proper Palpitation Technique
- ❑ Cleansing the Collection Site
- ❑ Performing Collection/Venipuncture
- ❑ Needle Selection
- ❑ Needle Approach Angles
- ❑ Collecting a Waste Tube
- ❑ Blood flow troubleshooting
- ❑ Order of Draw
- ❑ Tube Exchanging & Inversion
- ❑ Special Collections & Handling
- ❑ Post Collection
- ❑ Needle Removal Safety
- ❑ Applying Pressure
- ❑ Specimen Quality & Integrity (inversions & special handling)
- ❑ Labeling Requirements & Components

Case Study #1 – IV Contamination

Test	Contaminated Result	Actual Result
BUN	4 mg/dL	6 mg/dL
CA	5.2 mg/dL	7.7 mg/dL
CL	81 mmol/L	101 mmol/L
CO2	19 mmol/L	25 mmol/L
CREA	0.70 mg/dL	0.64 mg/dL
GLU	1331 mg/dL	130 mg/dL
K	9.3 mmol/L	5.0 mmol/L
NA	107 mmol/L	135 mmol/L

52 year old, female admitted for S/P breast cancer had AM labs collected at 0200. Specimen was contaminated with IV Fluid (Glucose/Potassium), and a recollect was requested. Specimen collected one hour later without contamination yielded quite different results.

What would have happened to the patient had they been treated based on the contaminated results?

Case Study #2 – Hemolyzed Potassium

Test	Hemolyzed Result	Actual Result
BUN	14 mg/dL	18 mg/dL
CA	8.0 mg/dL	11.2 mg/dL
CL	92 mmol/L	103 mmol/L
CO2	23 mmol/L	20 mmol/L
CREA	0.68 mg/dL	0.33 mg/dL
GLU	65 mg/dL	68 mg/dL
K	6.5 mmol/L	5.2 mmol/L
NA	137 mmol/L	141 mmol/L

15 day old, male in the NICU had AM Lab Renal Function Panel collected, but the specimen was grossly hemolyzed with a critically high result. Doctor requested the specimen be recollected since hemolysis can falsely increase the potassium. The recollect, which was not hemolyzed yielded a result within range.

What would have happened to the patient had they been treated based on the contaminated results?

Laboratory Contacts:

For General Laboratory Information:

Visit our UK Lab Website at https://www.testmenu.com/UKLab

Chandler Main Lab: (859)323-5431 or 323-5432
Good Samaritan Main Lab: (859)323-9579 or 323-9580

For Specific Training and Educational Tools:

Chad Webb, MLT Senior:
(859)257-6932 or chad.webb@uky.edu

Nikki Parks, Preanalytics Coordinator:
(859)699-3478 or nichole.parks@uky.edu

UK HealthCare


DISCUSSION
HealthCare
The Power of Advanced Medicine