

# 114825.2145 GRH Specimen Collection Procedure

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## Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Approval	Lab Vice President	6/03/2025	1.0	Sheila Erpelding (131695)	
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Approval	WB Supervisor Review	5/18/2025	1.0	Daniel Mallari (131070)	

Signatures from prior revisions are not listed.

## Version History

Version	Status	Type	Date Added	Date Effective	Date Retired
1.0	Approved and Current	Initial version	4/15/2025	6/03/2025	Indefinite

# Laboratory Policies & Procedures Great River Health

Number 114825.2145

Applies to:	<input checked="" type="checkbox"/> Southeast Iowa Regional Medical Center
<input checked="" type="checkbox"/> Henry County Health Center Laboratory	<input checked="" type="checkbox"/> West Burlington Campus Hospital Laboratory
<input type="checkbox"/> Clinics	<input checked="" type="checkbox"/> Fort Madison Campus Hospital Laboratory
<input type="checkbox"/> Rural Health Clinics	<input type="checkbox"/> Hospital-Based Clinics
	<input type="checkbox"/> Klein Center
	<input type="checkbox"/> Hospice

## GRH SPECIMEN COLLECTION PROCEDURE

### PURPOSE:

Great River Health Laboratories are a hospital-based laboratory with specific standards of excellence. To best serve our patients, all specimens will be collected according to the guidelines in this policy to ensure accurate patient results.

### PRINCIPLE:

To ensure accurate and reliable laboratory results, specimen collection adheres to specific principles, including using the correct collection method, proper identification of patient, aseptic technique, proper labeling, timely transport of specimens, and appropriate storage to maintain specimen integrity.

### SCOPE:

This procedure applies to those who are trained in Phlebotomy.

### DEFINITIONS:

PPE: Personal Protective Equipment

### EQUIPMENT/SUPPLY REQUIREMENTS:

Blood collection tubes/Blood culture bottles/Capillary tubes  
Needles/Single-use holders/Lancet  
Sterile syringes/Syringe transfer devices (Butterfly and Vacutainers)  
Tourniquets  
Gloves  
Antiseptics: Alcohol prep pads, Chloraprep®One-Step Sepp® (blood culture), or  
nonalcoholic-based cleanser (blood alcohol specimens).  
Gauze pads, Tape, Adhesive bandages, or Coban  
Heel warmer  
Sharps container

### PROCEDURES:

#### I. Venipuncture Technique

##### Purpose:


This procedure provides instructions for the collection of diagnostic blood specimens by venipuncture.






Step	Additional Information
1. Obtain physician order	<ul style="list-style-type: none"> <li>a. Orders must include the following:</li> <li>b. Patient's full name</li> <li>c. Date of birth</li> <li>d. Patient's Medical Record Number</li> <li>e. Accession Number</li> <li>f. Patient's location</li> <li>g. Physician's name</li> <li>h. Special comments</li> </ul>
2. Identify yourself and explain procedure	<p>Example: "I'm _____ from the laboratory and I'm here to draw a blood sample for a test your physician ordered."</p> <p><b>NOTE: Do Not</b> perform a blood collection against the patient's or guardian's consent. Report any objection to their nurse or physician.</p>
3. Identify the patient	<p>The patient's identity must be verified prior to specimen collection by using at least two identifiers. Laboratory staff will ask the patient to state their name and Date of Birth prior to specimen collection.</p> <p>If a patient is not able to participate in the identification process, a relative or friend of the patient or other healthcare professional may provide the patient's name and date of birth.</p> <p>If the patient has a language barrier, Propio Interpretation Service can be utilized. Refer to <a href="#">GRH Language Access Procedures</a> for more information.</p>
4. Confirm Identity	Confirm that the identity given by the patient matches the information listed on the requisition, orders, routing slip and/or patient armband.
5. Gather necessary supplies	Inspect for possible defects, check expiration dates.
6. Wash Hands	Hand hygiene must be performed prior to patient contact. Alcohol based hand rub may be used except for visibly soiled hands or patients with Clostridium difficile. In these cases, soap and water must be used.
7. Don Gloves	Other PPE may be required. Refer to the Isolation and Standard Precautions Policy for details.
8. Position patient	<ul style="list-style-type: none"> <li>a. <b>Outpatients:</b> Ask patient to be seated in the phlebotomy chair with their arm on the slanting arm rest and extend their arm to form a straight line from the shoulder to the wrist. If necessary, have the patient lie down in a comfortable position and extend their arm as described above. A pillow placed under the arm can be used if additional support is needed.</li> <li>b. <b>Inpatients:</b> Gently position the arm to form straight line from the shoulder to the wrist.</li> </ul>



	<p>this appears to be the only alternative, consult with the physician.</p> <p>c. Any other location needs to be approved by the provider.</p>
	<p><b>Other Factors:</b></p> <ul style="list-style-type: none"> <li>d. Extensive scarring- Healed burn areas should be avoided.</li> <li>e. Mastectomy- Consult physician before drawing from the side on which a mastectomy was performed.</li> <li>f. Hematoma- Phlebotomy must not be performed on any size hematoma. If another vein site is not available, collect the specimen distal to the hematoma.</li> <li>g. Specimens should not be collected from an arm with an intravenous site.</li> <li>h. Cannula, Fistula, Vascular Graft- Use only after consulting the attending physician.</li> </ul>
12. Locate Vein	<p>Palpate and trace the path of the veins several times with the index finger. Unlike veins, arteries pulsate, are more elastic and have a thick wall. Thrombosed veins lack resilience, feel cord-like, roll easily and should not be used.</p>
13. Cleanse site	<p>Using a prepared alcohol pad, cleanse area with a circular motion from the center to the outside of the venipuncture site. See separate procedure for blood culture collection.</p> <p><b>Note:</b> Do Not touch site after cleansing. Do Not use alcohol-based cleansers when drawing blood alcohol specimens.</p>
14. Venipuncture using evacuated tubes	<ul style="list-style-type: none"> <li>a. Assemble needle and tube holder if not already pre-assembled.</li> <li>b. Make sure the patient's arm or the puncture site is in a downward position to prevent back flow.</li> <li>c. Place the thumb 1-2 inches below the puncture site to draw the skin taut.</li> <li>d. Inform patient that the venipuncture is about to occur.</li> <li>e. With the bevel up, puncture the vein with the needle at an angle of insertion of 30 degrees or less. Keeping the needle as stable as possible and following the correct order of draw, push/connect the first tube into the needle.</li> <li>f. Release the tourniquet as soon as possible after blood begins to flow. During the collection, do not allow contents of the tube to contact the closure.</li> <li>g. Use correct order of draw.</li> <li>h. Allow the tube to fill until the vacuum is exhausted, and blood flow ceases.</li> </ul>

	<ul style="list-style-type: none"> <li>i. When the blood ceases to flow, remove the tube from the holder. The sleeve re-covers the needle point that pierces the tube closure stopping blood flow. To obtain additional specimens, insert the next tube onto the holder and repeat the collection procedure. Always remove the last tube from the holder prior to withdrawing the needle from the vein. This should be done when only one tube is being drawn.</li> <li>j. Gently invert each tube 5 to 10 times immediately after drawing.</li> </ul> <p><b>Note:</b> Do not mix vigorously.</p>
15. Venipuncture using needle and syringe	<ul style="list-style-type: none"> <li>a. Assemble needle and syringe.</li> <li>b. Make sure the patient's arm or the puncture site is in a downward position to prevent back flow.</li> <li>c. Place the thumb 1-2 inches below the puncture site to draw the skin taut.</li> <li>d. Inform the patient that the venipuncture is about to occur.</li> <li>e. With the bevel up, puncture the vein with the needle at an angle of insertion of 30 degrees or less. Keeping the needle as stable as possible, slowly withdraw the desired amount of blood.</li> <li>f. Release the tourniquet as soon as possible after the blood begins to flow.</li> </ul>
16. Place the gauze pad lightly over the venipuncture site	
17. Remove the needle and activate the safety mechanism	Dispose of needle holder with needle attached with safety shield activated in a biohazard sharps container.
18. Bandage site	<ul style="list-style-type: none"> <li>a. Apply mild pressure to the site with a gauze pad.</li> <li>b. Apply pressure for at least 2 minutes before checking for bleeding and covering the site with an adhesive bandage or gauze and tape. If bleeding persists, notify the nurse or physician. Additional pressure may be required if the patient is receiving anticoagulants.</li> <li>c. Do not have the patient bend their arm to hold pressure on the site – it increases the possibility of a hematoma developing.</li> <li>d. If a hematoma develops at any time during the procedure, release the tourniquet, remove the needle, and apply pressure.</li> <li>e. Check that bleeding has ceased, observe for hematoma and apply an adhesive or gauze bandage over the site. Where patients' skin is compromised, use coban.</li> </ul>

Order of Draw			
The purpose is to avoid possible test result errors due to cross contamination from tube additives.			
Tube Cap Color	Additive	Inversions/Color	Notes/Exceptions
	Blood Culture	8 to 10	

	Sodium Citrate	3 to 4/Light Blue	<ul style="list-style-type: none"> <li>• <b>Do not over or under fill light blue tubes:</b> Fill to the clear blue line on the tube</li> <li>• <b>When drawing a single light blue top or using a butterfly use a light blue discard tube first</b></li> </ul>
	Clot Activator	5 to 6/Red or Gold	
	Lithium Heparin	8 to 10/Green	
	EDTA	8 to 10/Pink or Lavender	
	Sodium Fluoride	8 to 10/Grey	

## II. Capillary Blood Collection Procedure

This procedure provides instructions for collecting capillary blood specimens using finger and heel puncture techniques.

Steps	Additional Information
1. Obtain physician order	a. Orders must include the following: b. Patient's full name c. Date of birth d. Patient's Medical Record Number e. Accession number f. Patient's location g. Physician's name h. Special comments
2. Identify yourself and explain procedure	Example: "I'm _____ from the laboratory and I'm here to draw a blood sample for a test your physician ordered." <b>NOTE: Do Not</b> perform a blood collection against the patient's or guardian's consent. Report any objection to their nurse or physician.
3. Identify Patient	The patient's identity must be verified prior to specimen collection by using at least two identifiers. Laboratory staff will ask the patient to state their name and Date of Birth prior to specimen collection.



	<p>If a patient is not able to participate in the identification process, a relative or friend of the patient or other healthcare professional may provide the patient's name and date of birth.</p> <p>If the patient has a language barrier, Propio Interpretation Service can be utilized. Refer to <a href="#">GRH Language Access Procedures</a> for more information.</p>
4. Confirm Identity	Confirm that the identity given by the patient matches the information listed on the requisition, orders, routing slip and/or patient armband.
5. Gather Supplies	Inspect for possible defects, check expiration dates.
6. Wash Hands	Hand hygiene must be performed prior to patient contact. Alcohol based hand rub may be used except for visibly soiled hands or patients with Clostridium Difficile. In these cases, soap and water must be used.
7. Don gloves	Other PPE may be required. Refer to the Isolation and Standard Precautions Policy for details.
8. Position the patient	Outpatients should be seated in a chair suitable for capillary puncture. In some situations, the use of a bed, cot or reclining chair may be appropriate for positioning the patient.
9. Select site	<ol style="list-style-type: none"> <li>In infants less than one year old, heel puncture is generally performed. Fingers of newborns must not be used.</li> <li><b>Use:</b> Medial or Lateral portions of the flat surface of the heel.</li> <li><b>Avoid:</b> The posterior curvature, arch area, swollen areas and previous puncture site.</li> <li>With older children and adults, use the palmar surface of the distal segment of the middle or ring finger. The side or tip of the finger should be avoided. The puncture should occur across the fingerprints not parallel to them.</li> <li>The middle and ring finger are the preferred sites. The fifth (pinky) finger must not be punctured.</li> <li>Do not attempt to use a swollen or previously punctured site.</li> </ol>
10. Warm finger/heel	Warming increases blood flow. Place heel warmer on infant's foot for 3 to 5 minutes.
11. Cleanse the site	Using prepared alcohol pad, cleanse the area and allow to air dry.
12. Puncture skin	<ol style="list-style-type: none"> <li>Hold the patient's finger/heel firmly to prevent movement.</li> <li>Using an approved finger/heel stick device, position the device on the patient's skin.</li> <li>Notify the patient of the imminent puncture.</li> </ol>



21. Thank patient	Ask if there is anything else you can do for them.
22. Remove gloves and wash hands	

### III. Laboratory Blood Draws Performed Above an Intravenous Infusion Site

Collecting blood from an arm that is being infused with IV fluid carries a risk for erroneous and misleading test results. Blood must never be collected from the same arm or above the site in which there is an IV. If access to veins is limited and all other options have been exhausted, a nurse may be asked to turn off an IV for the purpose of collecting the blood sample.

**Note: The IV should be turned off for a minimum of 2 minutes prior to venipuncture being performed.**

Steps	Additional Information
1. Obtain physician order	<ul style="list-style-type: none"> <li>a. Orders must include the following:</li> <li>b. Patient's full name</li> <li>c. Date of birth</li> <li>d. Patient's Medical Record Number</li> <li>e. Accession number</li> <li>f. Patient's location</li> <li>g. Physician's name</li> <li>h. Special comments</li> </ul>
2. Identify yourself and explain procedure	<p>Example: "I'm _____ from the laboratory and I'm here to draw a blood sample for a test your physician ordered."</p> <p><b>NOTE: Do Not</b> perform a blood collection against the patient's or guardian's consent. Report any objection to their nurse or physician.</p>
3. Identify patient	<p>The patient's identity must be verified prior to specimen collection by using at least two identifiers. Laboratory staff will ask the patient to state their name and Date of Birth prior to specimen collection.</p> <p>If a patient is not able to participate in the identification process, a relative or friend of the patient or other healthcare professional may provide the patient's name and date of birth.</p> <p>If the patient has a language barrier, Propio Interpretation Service can be utilized. Refer to <a href="#">GRH Language Access Procedures</a> for more information.</p>
4. Confirm Identity	Confirm that the identity given by the patient matches the information listed on the requisition, orders, routing slip and/or patient armband.
5. Gather necessary supplies	Inspect for possible defects, check expiration dates.

6. Wash hands.	Hand hygiene must be performed prior to patient contact. Alcohol based hand rub may be used except for visibly soiled hands or patients with Clostridium Difficile. In these cases, soap and water must be used.
7. Don gloves.	Other PPE may be required. Refer to SEIRMC Isolation and Standard Precautions Policy for details.
8. Make the decision that it is necessary to use the IV arm	If fingerstick is not possible and no other veins are accessible.
9. Ask the Nurse to turn the IV off	Intravenous fluid is considered medication. Laboratory personnel <b>may not</b> turn off IV's.
10. Wait at least two minutes before applying the tourniquet	
11. Apply the tourniquet	Apply the tourniquet between the IV site and the intended venipuncture site, but not so close that it will impede the procedure or constrict the catheter within the vein.
12. Select the venipuncture site	Draw blood below the IV site if possible. Do not select the same vein in which the IV is infusing.
13. Perform the venipuncture	Following Venipuncture Technique Procedure
14. Label the tubes	<b>Before</b> leaving patient's bedside, label tubes with the following: <ul style="list-style-type: none"> <li>a. First and last name</li> <li>b. Date of birth</li> <li>c. Date and time drawn</li> <li>d. Collector's initials</li> </ul> <b>Note: ALL samples must be labeled at the patient's bedside or chair immediately after collection and within sight of the patient.</b> <b>Electronically generated labels are acceptable.</b>
15. Confirm labeling	Compare labeled tubes to the patient's armband or in the case of outpatients, show the tubes to the patient and ask them to confirm the tubes are labeled correctly with their name.
16. Discard used supplies	
17. Thank patient	Ask if there is anything else you can do for them.
18. Remove gloves and wash hands	
19. Notify the nurse to restart the IV	Laboratory personnel <b>should not</b> restart IV's.
20. Enter the appropriate comment in the Laboratory system	Use appropriate comment to denote the type of draw performed (i.e. Drawn Above Shut off IV or Drawn Below IV Site).

### Emergency Situations:

Minor adverse reactions to specimen collection include hematomas, abrasions, and nausea. Serious reactions like vomiting, fainting, convulsions, or unresponsiveness must be documented appropriately, refer to [GRH Medical Emergency Response](#).

#### IV. Urine Specimen Collection

Refer to [GRH Clean Catch Urine Collection Instructions](#)

#### V. Timed Urine Collections

Refer to [GRH 24 Hour Urine Collection Instructions](#)

#### VI. Stool Specimen Collection

Refer to [GRH Stool Collection Instructions](#)

#### VII. Specimens for Culture

Refer to the culture description in the test catalog.

#### VIII. Specimen for Cytology and Histology

Refer to the test description in the test catalog and [GRH Surgical Pathology and Cytology Specimen Handling Policy](#).

#### REFERENCES:

CLSI GP41, 7<sup>th</sup> ed. April 2017, Collection of Diagnostic Venous Blood Specimens.

So, You're Going to Collect a Blood Specimen: An Introduction to Phlebotomy,  
College of American Pathologists, Current Edition, 2017

CLSI GP42-A6, #H04-A6, Vol. 28 No. 25, *Procedures and Devices for the Collection of Diagnostic Capillary Blood Specimens; Approved Standard-Sixth Edition*.

[GRH Patient Identification](#)

[GRH Isolation and Standard Precautions Plan](#)

[Hand Hygiene Guidelines](#)

[GRH Specimen Labeling and Rejection Procedure](#)

[GRH Medical Emergency Response](#).