

Laboratory Services

Guide to Conduct Hand Hygiene Reviews



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If you have questions about this guide or about hand hygiene reviews in general, you can email hand.hygiene@ahs.ca or contact your zone [Project Manager](#).



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Laboratory (Lab) Services is responsible for specimen procurement and providing diagnostic testing to patients across the continuum of care. Interactions with patients may occur in acute care, continuing care, ambulatory care, and in outpatient settings. In some cases, Lab Services staff may provide services within patients' homes. For reviews collected during in-home visits, please refer to the Home Care department section.

Lab Services staff who provide patient care include Medical Laboratory Technologists (MLT), Medical Laboratory Assistants (MLA) and Combined Laboratory and X-ray Technologists (CLXTs). CLXTs are more commonly employed in rural areas. If a CLXT is observed performing a phlebotomy and an x-ray during a single patient interaction (e.g. phlebotomy and chest x-ray) the CLXT will be recorded using the Lab Services provider group in the Clean Hands System. If the CLXT is only performing an x-ray, the CLXT should be recorded under the Diagnostic and Therapeutic Technologists provider group.

Although medical laboratory technologists and assistants are required to perform hand hygiene many times when working in the diagnostic area, hand hygiene reviews are limited to those interactions that laboratory staff have with patients and patient care supplies. **No reviews will be performed within the diagnostic testing (technical) area.**

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One of the most common interactions that Lab Services staff will have with patients is during blood draws (i.e. phlebotomy or venipuncture). Phlebotomies include all blood draws including micro punctures (i.e. heel pokes, finger pokes) regardless of the equipment used by the phlebotomist. A venipuncture is a blood draw that uses a closed collection system (vacuum-based). When using a vacuum-based system, the risk of a blood exposure is low due to the engineered safety device being used.

Based on IPC program approval, this factor along with consideration of practicality and workflow allows for Lab Services staff to readjust the patient environment as required before removing gloves after performing a phlebotomy, provided that the gloves are not visibly soiled with blood. Moment 3 (AFT-BFL) and Moment 4 (AFT-PAT/ENV) are therefore compressed and recorded as a single Moment 4 (AFT-PAT/ENV) on the hand hygiene review tool.

If the phlebotomist needs to use an alternate collection process to draw the blood sample (i.e. a syringe), performs a micro puncture, or deviates from the standard phlebotomy sequence, the risk of exposure is higher and the use of compressed moments no longer applies.



Observation point: The use of compressed moments is specific to the phlebotomy procedure only. A compressed moment is when two separate hand hygiene moments are recorded as a single moment providing the process outlined in the algorithm is followed.

Observation Point: Hand hygiene reviewers who are not familiar with blood collection devices should receive orientation from an IPC Hand Hygiene Coordinator or from Lab Services.

The phlebotomy may occur within the patient care unit (patient's room, cubicle, curtain space) or it may occur in the laboratory outpatient collection area. *Hand Hygiene for Phlebotomists - Patient Care Settings* algorithm outlines the proper sequence for a standard phlebotomy procedure.



Compressed moments are different than combined moments.

See Section 3.4 (Combined Moments)

In the case where the phlebotomist needs to return to the clean supplies (e.g. unsuccessful draw), the

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phlebotomist must perform hand hygiene before accessing the supplies; Moment 2 (BEF-ASP).

In addition to phlebotomies, Lab Services may also perform electrocardiograms (ECGs). It is important to note that the ECG procedure may be performed by Lab Services, Diagnostic Imaging, Nursing, or Cardiology and is dependent on the resources available within the facility. Reviewers must be sure to correctly identify the healthcare provider type performing the ECG. If only an ECG is required and is completed by a CLXT, the CLXT is classified under the Lab Services provider group.

The touch surfaces of the ECG machine are cleaned and disinfected after each patient, therefore, the machine is considered patient environment. The healthcare provider may move between the patient and the machine without performing hand hygiene.

Lab Services staff may collect or assist with the collection of other types of patient samples including but not limited to:

- blood glucose testing
- sputum
- urine
- feces
- bone marrow
- buccal swabs
- urea breath tests

Staff in the laboratory collection areas may directly handle patient specimens to properly label and prepare them for the diagnostic area. Hand hygiene must be performed by Lab Services staff after collecting or handling patient specimens; Moment 3 (AFT-BFL).

Lab Services staff may also handle clean and sterile supplies. Supplies may include PPE (including gloves), needle sets, specimen collection containers, dressing supplies (band aids, gauze), ECG leads etc. Depending on the laboratory, sterile blood products (e.g. packed cells, transfusion sets and vaccines) may be issued to nursing staff. Lab Services staff may also provide beverages and food items to patients. Hand hygiene must be performed before the handling of clean and sterile supplies or preparing or providing food and beverages for patients; Moment 2 (BEF-ASP).

The patient requisition/laboratory identification labels are considered bedside charting documents (see Section 3.5 Environments). This enables the healthcare provider to move between the requisition or labels and the patient without performing hand hygiene. Data entry stations are not cleaned between patients and are therefore considered healthcare environment.

Observation Point: When performing data entry in a laboratory outpatient collection area, the healthcare provider may access the patient requisition and immediately enter the patient information into the computer without performing hand hygiene as no direct contact with the patient has occurred and paper presents a low risk of transmission.

Common examples of hand hygiene observations that reviewers may observe; the list is not intended to be all-inclusive:

Moment 1 (BEF-PAT/ENV)

- before contact with the patient's identification bracelet or the patient's identification documents (e.g. driver's license)
- before contact with patient belongings (e.g. coats, purses, blankets) or ambulation aids (e.g. canes, walkers, wheelchairs)
- before positioning the patient for a phlebotomy, electrocardiogram, or any other procedure
- before contact with the patient's environment (e.g. lowering bedrail, turning on light, adjusting the bed)
- before stabilizing a patient for a procedure (e.g. holding pediatric patient's arm for the phlebotomy procedure)

Moment 2 (BEF-ASP)

- before accessing clean and sterile supplies including PPE (e.g. gloves, linens, collection supplies, sample containers, sterile blood products)
- before performing a phlebotomy or micro-puncture
- before providing food to a patient (e.g. cookies, juice, water, etc.)
- before preparing and providing oral glucose beverage or urea breath beverage
- before performing a glucometer test
- before collection or assisting with the collection of specimens other than blood (bone marrow, fluids, buccal swabs, etc.)

Moment 3 (AFT-BFL)

- after performing a venipuncture where visible blood is present on the phlebotomist's gloves
- immediately after performing a micro puncture or using a non-vacuum based system to draw blood
- after assisting with the collection of or handling specimens (e.g. urine, feces, buccal swabs, sputum, etc.)

Note: Moment 3 occurs when the healthcare provider **directly** handles the specimen or the transport container (i.e. biohazard bag)

- after removing PPE including gloves
- after the disposal of contaminated sharps

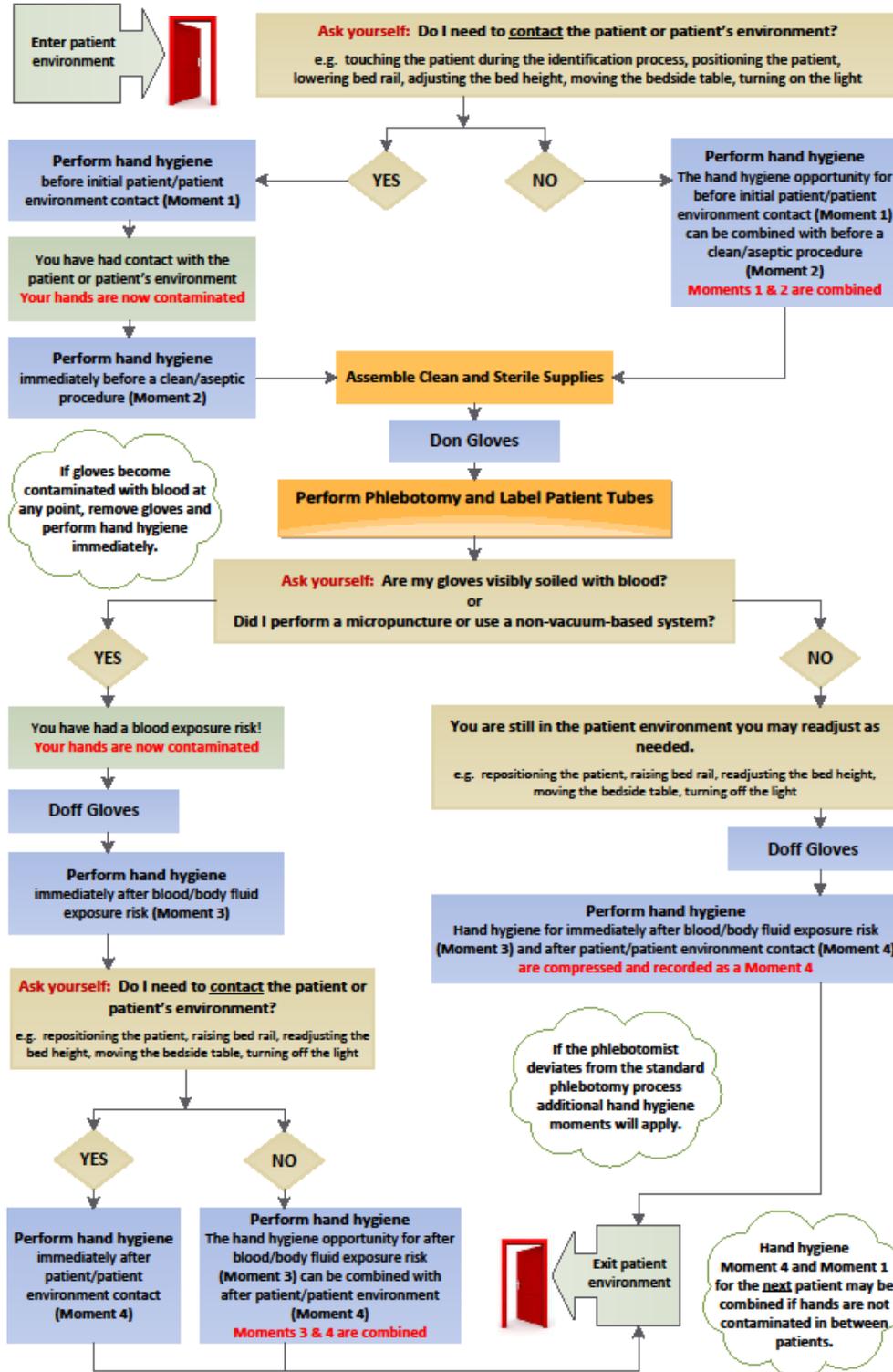
Moment 4 (AFT-PAT/ENV)

These examples only apply if they are the last point of contact with the patient/patient's environment.

- after contact with the patient or patient's environment (e.g. repositioning patient after phlebotomy, repositioning bed, turning off light, etc.)
- after contact with patient belongings (e.g. coats, purses, blankets, etc.) or patient ambulation aids (e.g. canes, walkers, wheelchairs, etc.)
- after completion of an electrocardiogram procedure



Hand Hygiene for Phlebotomists - Patient Care Settings



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Lab - Scenario 1 (Preparing Glucose Beverage for Gestational Diabetic Screen)

A medical laboratory assistant (MLA) is at the laboratory outpatient reception desk and greets a patient without making contact. The MLA performs hand hygiene, accesses a clean disposable glass, the glucose beverage from the fridge and gives the beverage to the patient to drink. The MLA takes the used glass from the patient and throws it in the trash. The MLA returns to the reception area to set the timer.



HCP – Laboratory Services (MLA)

Moment 2 (wash/ABHR); Moment 1 (wash/ABHR); Moment 3 (miss); Moment 4 (miss)

Rationale:

- Moment 2 (BEF-ASP) is recorded as compliant when the MLA performs hand hygiene to access the supplies needed (i.e. glucose beverage, clean glass).
- Moment 1 (BEF-PAT/ENV) is recorded as compliant as the MLA's hands are still clean when she hands the glass to the patient. The glass is considered patient environment. This is a combined moment with Moment 2 above (see Section 3.4 Combined Moments).
- Moment 3 (AFT-BFL) is recorded as a miss because the MLA did not perform hand hygiene after taking the cup from the patient (after the patient drank the beverage). This presents a body fluid exposure risk (i.e. saliva).
- Moment 4 (AFT-PAT/ENV) is recorded as a miss when the MLA moves from the patient environment (i.e. used glass) to the healthcare environment (i.e. timer).

Exploring Possibilities:

- If the MLA does not pour the glucose beverage into the glass and hands the bottle directly to the patient, the recorded moments would be the same.
- If the patient discards their own glass into the trash and the MLA had no contact with the used glass, a Moment 3 (AFT-BFL) would not be recorded.

Take Away Messages:

- Glucose beverage is considered food and accessing or handling it is considered a Moment 2 (BEF-ASP).

Lab - Scenario 2 (Specimen Handling)

A registered nurse (RN) walks into the lab reception/drop-off area wearing gloves and carrying a urinalysis specimen contained inside a Ziploc bag. The RN hands the specimen to the medical laboratory technologist (MLT) who takes the bagged specimen and places it on the counter. The RN doffs her gloves and performs hand hygiene. The MLT dons gloves, removes the specimen from the bag and checks to ensure that it is labelled correctly. The MLT then carries the urine container into the technical area and begins to test the specimen.



HCP – Nurses (RN)

Moment 3 (wash/ABHR)

HCP – Laboratory Services (MLT)

Moment 3 (miss); Moment 2 (miss)

Rationale:

Nurse

- Moment 3 (AFT-BFL) is recorded as compliant when the RN doffs her gloves and performs hand hygiene after handing the specimen to the MLT.

Medical Laboratory Technologist

- Moment 3 (AFT-BFL) is recorded as a miss because the MLT took the Ziploc bag from the RN and then donned clean gloves to access the specimen.
- Moment 2 (BEF-ASP) is recorded as a miss because the MLT accessed clean supplies (i.e. gloves) without performing hand hygiene after contacting the bagged specimen.

Exploring Possibilities:

- If the MLT would have handled the actual urine specimen instead of the Ziploc bag, the moments recorded would still be the same.

Take Away Message:

- Laboratory specimens present a blood and/or body fluid exposure risk even if they are contained within a transport container. There is no way to ensure the outside of the Ziploc bag does not become contaminated during the bagging process.
- Observations may take place in the laboratory reception/drop-off area, but cannot be collected inside the technical area.

Lab - Scenario 3 (Electrocardiogram)

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A combined laboratory and x-ray technologist (CLXT) performed hand hygiene in the corridor and enters a patient's cubicle to perform an ECG. She closes the patient's curtain for privacy, identifies the patient and contacts the wristband in the process. The CLXT accesses clean leads and electrodes and places them on the patient. She performs hand hygiene and proceeds to type the patient information into the ECG machine. She finishes the ECG test, removes the leads and performs hand hygiene. She opens the curtain, dons gloves and proceeds to clean the ECG machine.



HCP – Laboratory Services (CLXT)

Moment 1 (miss); Moment 2 (miss); Moment 4 (wash/ABHR); Moment 2 (miss)

Rationale:

- Moment 1 (BEF-PAT/ENV) is recorded as a miss when the CLXT had contact with the healthcare environment (curtain) before touching the patient (i.e. wristband).
- Moment 2 (BEF-ASP) is recorded as a miss when the CLXT accessed clean supplies (leads) after touching the patient wristband (patient environment).
- Moment 4 (AFT-PAT/ENV) is considered compliant as the CLXT performed hand hygiene after contact with the patient, before contacting the healthcare environment (i.e. curtain).
- Moment 2 (BEF-ASP) is recorded as a miss when the CLXT accesses clean supplies (i.e. gloves) without clean hands after contacting the healthcare environment (i.e. curtain).

Exploring Possibilities:

- If the CLXT had to perform a portable chest x-ray and an ECG during the same patient interaction, then the CLXT would be recorded under the Diagnostic Therapeutic Technologist provider group.
- If the CLXT had to perform a phlebotomy and the ECG during a single patient interaction then Moment 1 (BEF-PAT/ENV), Moment 2 (BEF-ASP) and a **compressed** Moment 4 (AFT-PAT/ENV) would be recorded.

Take Away Message:

- Curtains are considered healthcare environment (see Section 3.5 Environments).
- The ECG machine is cleaned between patients, therefore, the CLXT can move between the patient and the machine without performing hand hygiene.
- Hand hygiene observations associated with patient equipment cleaning cannot be recorded.

Lab - Scenario 4 (Phlebotomy Laboratory Outpatient Department)

A phlebotomist walks to the reception desk to retrieve a lab requisition. He calls the patient and walks alongside them to the collection chair without making contact. The phlebotomist begins to enter the patient information into the computer. The phlebotomist performs hand hygiene and accesses the clean supplies, dons gloves and adds a piece of tape to the top of his glove. He performs the blood collection using a vacuum-based collection system, places a cotton ball on the collection site and places the strip of tape from the top of glove over the cotton ball. The phlebotomist labels the tubes, places the tubes in a biohazard bag, and drops them off in the collection bin. There is no visible blood on the phlebotomist's glove. The phlebotomist doffs their gloves, performs hand hygiene using ABHR and grabs a new requisition from the reception desk.



HCP – Laboratory Services (Phlebotomist)

Moment 2 (wash/ABHR), gloves; Moment 1 (wash/ABHR); Moment 4 (wash/ABHR), gloves

Rationale:

- Moment 2 (BEF-ASP) is recorded as compliant when the phlebotomist accesses the clean supplies and dons gloves to perform the phlebotomy.
- Moment 1 (BEF-PAT/ENV) is recorded as compliant as the phlebotomy procedure was the phlebotomist's first point of direct contact with the patient. This is recorded as a combined moment with Moment 2 above (see Section 3.4 Combined Moments).
- Moment 3 (AFT-BFL) and Moment 4 (AFT-PAT/ENV) is recorded as compliant for a **compressed** Moment 4 (AFT-PAT/ENV) when the phlebotomist performs hand hygiene after doffing gloves. The phlebotomist had no visible blood on their gloves and therefore **only** a Moment 4 (AFT-PAT/ENV) is recorded.

Exploring Possibilities:

- If the phlebotomist handled the patient identification during the data entry process, they would be required to perform hand hygiene before contacting the patient's identification; Moment 1 (BEF-PAT/ENV) and then again after contacting the I.D. before contacting the computer; Moment 4 (AFT-PAT/ENV).
- If the phlebotomist was unsuccessful at the phlebotomy and required a second attempt, only a Moment 1 (BEF-PAT/ENV) and Moment 2 (BEF-ASP) is recorded for the first attempt and a Moment 2 (BEF-ASP) and Moment 3 (AFT-BFL) (if visible soiling of the gloves occurred) and Moment 4 (AFT-PAT/ENV) would be observed and recorded in relation to the second attempt as outlined in the *Hand Hygiene for Phlebotomists in Patient Care Settings* algorithm. Moment 1 (BEF-PAT/ENV) would be recorded at the first point of contact with the patient.

Take Away Message:

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- *Hand Hygiene for Phlebotomists in Patient Care Settings* algorithm outlines key decision points a phlebotomist will need to make.
- A standard phlebotomy procedure using a vacuum-based collection system with standardized workflow in the **outpatient laboratory** setting will require the phlebotomist to perform hand hygiene twice (2) and will be routinely recorded as a Moment 1 (BEF-PAT/ENV), Moment 2 (BEF-ASP) and a **compressed** Moment 4 (AFT-PAT/ENV).
- A phlebotomy performed using a vacuum-based collection system in the **inpatient/emergency** setting may require the phlebotomist to perform three (3) opportunities of hand hygiene and will be routinely recorded as Moment 1 (BEF-PAT/ENV), Moment 2 (BEF-ASP) and Moment 4 (AFT-PAT/ENV) if:
 - The phlebotomist has to contact the patient during the identification process (i.e. check wristband) or contact items in the patient environment (i.e. lower bedrail, turn-on the light).
- Patient's identification is considered the patient's environment.



No reviews will be performed within the diagnostic testing (technical) area of the Lab.