
Blood Collection - Hand Hygiene Practice Guidelines

BACKGROUND:

During the collection of blood there is a risk of direct introduction of pathogens into a patient's bloodstream (1). Effective hand hygiene immediately prior to performing any procedure is the single most effective way to minimise the risk of transmission of microorganisms (1). HHA recommend the following guidelines for hand hygiene during the collection of blood specimens.

KEY CONSIDERATIONS & GUIDING PRINCIPLES:

Equipment:

- Gather all equipment for the venepuncture procedure and check against the pathology form *before* touching the patient.
- Only prepare the equipment once you have moved into the patient zone and performed hand hygiene.

Patient Set Up:

- Hand hygiene **must** be performed *before* setting up the patient.
- Hand hygiene must be performed **again** and gloves donned in preparation for commencement of the venepuncture procedure *only* once setup of patient and equipment is complete.

Glove Use:

- Gloves should not be applied (unless otherwise indicated) until hand hygiene has been performed IMMEDIATELY prior to performing the venepuncture procedure.
- If gloves are required earlier (e.g. Transmission Based Precautions) these will need to be removed, hand hygiene performed, and a new set of gloves applied IMMEDIATELY prior to venepuncture.

Additional Equipment:

- If additional equipment is required after the patient has been touched or gloves applied, gloves **must** be removed (if worn) and hand hygiene performed *before* touching the clean stock in/on the trolley.

Cleaning between each patient:

- Equipment which is potentially contaminated with patient's flora (such as the tourniquet, injection tray, kidney dish, top of trolley or work bench) **must** be cleaned between every patient.

METHOD:

1. Receive/read blood collection slip and verify patient appropriateness for procedure.
2. Gather venepuncture equipment and tubes (*If required, e.g. Transmission- Based Precautions, place all necessary equipment into a suitable container to take equipment into patient zone.)
3. **Move into the Patient Zone & Perform Hand Hygiene.**
4. Introduce self to patient and gain consent, enquire if they have had blood test previously, if not – explain collection procedure.
5. Assemble/prepare venepuncture equipment.
6. Ensure patient is identified, request form and test conditions have been checked and position the patient appropriately.
7. Position equipment next to patient. DO NOT retrieve additional equipment from trolley – **if required see Key Considerations regarding additional equipment.**
8. Apply tourniquet. Palpate to identify vein position and direction.
9. Once appropriate vein has been located loosen tourniquet and ensure equipment and patient are ready for venepuncture to begin.
10. **Perform Hand Hygiene and don gloves**
11. Tighten tourniquet, re-locate vein position and direction, clean area (as per organisation infection control policy) and allow to air dry. **(Please see additional notes regarding tourniquet contamination.)** To ensure aseptic technique, do not re-palpate or wipe the area with cotton wool.
12. **(If necessary to re-palpate repeat step 10)**
13. Perform venepuncture. Loosen tourniquet during procedure when appropriate.
14. Place tubes in an appropriate container e.g. kidney dish.
15. Remove needle and apply appropriate pad and pressure to site (where possible, ask patient to hold and apply pressure).
16. Remove tourniquet, discard sharps & dispose of waste
17. Label tubes and place in pathology bag
18. **Doff gloves and perform Hand Hygiene**
19. Check patient's venepuncture site for any sign of bleeding. Apply clean dressing and tape in place once bleeding has stopped.
20. Explain to the patient to monitor the site for a further 15 minutes and provide after care advice.

21. Clean all equipment touched during procedure – top of trolley, kidney dish, tourniquet and any other item or surface potentially contaminated with patient microorganisms.
22. Dispose of waste
23. **Perform Hand Hygiene**

VARIATIONS FOR CONSIDERATION:

Monitoring of Venepuncture Site

- Blood collectors may be required or choose to stay with the patient to closely observe the venepuncture site and apply a clean dressing *before* moving back to the trolley to discard of waste and label tubes.
- In this case final activities including after-care advice to the patient and cleaning of equipment should occur *after* sharps are discarded, waste is disposed of, gloves are doffed and hand Hygiene has been performed.

Establishing an Aseptic Field

Some blood collectors are trained to establish an aseptic field (using their trolley) for the venepuncture procedure. In this case the following must apply:

- the surface of the trolley must be completely clear of any items
- the surface of the trolley must not become contaminated at any time during the venepuncture procedure
- the surface of the trolley must be appropriately cleaned between every patient

If an aseptic field is established for blood collection as above, collectors may return to the patient after labelling tubes *without* doffing gloves and performing hand hygiene.

When an aseptic field is not established

If the surface of the trolley contains additional equipment/items OR is not able to be completely and adequately cleaned between every patient, gloves must be removed and hand hygiene performed before moving back to touch the patient, as it is likely hands have become contaminated by organisms on the trolley's surface.

ADDITIONAL NOTES:

1. Tourniquets are commonly used on multiple patients and have the potential to become highly contaminated (1). Tourniquets are non-critical items and require thorough cleaning between patients (2). Where practicable, a clean tourniquet should be used for each patient.
2. Touching an applied tourniquet after performing hand hygiene can re-contaminate the user's hands (with the patient's own skin flora).
3. After performing hand hygiene and donning gloves for needle insertion it is best practice NOT to manipulate the applied tourniquet, although this may be unavoidable due to individual patient or clinician needs.
4. As per the blood collection standard (3), tightened tourniquets should not be left in position for greater than 1 minute. The patient and equipment should be prepared prior to tightening the tourniquet.
5. If the tourniquet is touched after donning gloves (e.g. for tightening and releasing purposes) due to individual patient or clinician needs contact should be kept to a minimum using only your non-dominant hand.
6. Additional episodes of Hand Hygiene will be required if at any time prior to touching the patient, a collector touches the surrounding curtains.
7. Additional episodes of Hand Hygiene will be required if at any time during a procedure, the collector is in contact with contaminated items or their own hands are visibly soiled.

Reference:

1. World Health Organisation (WHO). WHO Guidelines on Hand Hygiene in Health Care. In: World Alliance for Patient Safety, editor. First Global Patient Safety Challenge Clean Care is Safer Care. 1 ed. Geneva: World Health Organisation Press; 2009.
2. NHMRC. Australian Guidelines for the Prevention and Control of Infection in Healthcare. Commonwealth of Australia; 2010.
3. Clinical and Laboratory Standards Institute. Procedures for the collection of diagnostic blood specimens by venipuncture; approved standard - sixth edition. CLSI document H3-A6. Pennsylvania: Clinical and laboratory standards institute; 2007.