
Dialysis - Hand Hygiene Practice Guidelines

BACKGROUND:

During dialysis 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 recognise processes maybe specific to each dialysis unit and each individual patient. HHA recommend the following guidelines for hand hygiene during dialysis, some local adaptation may be required.

KEY CONSIDERATIONS & GUIDING PRINCIPLES:

Establishing an aseptic field:

Dialysis requires the establishment of an aseptic field for the procedure.

An aseptic field can be established using a tray, trolley or designated work surface.

To ensure an aseptic field is appropriately established the following must apply:

- Hand hygiene **must** be performed *before* establishment of an aseptic field
- The surface of the trolley/ designated work surface must be completely clear of any items
- The surface of the trolley/ designated work surface must not become contaminated at any time during any procedure
- The surface of the trolley/ designated work surface must be appropriately cleaned prior to each new procedure, and prior to placing equipment on it

Preparation of Equipment:

- Hand hygiene **must** be performed *before* preparation of equipment
- Packets should be checked for integrity and expiry dates
- Gather and prepare all equipment, including local anaesthetic and anti-coagulant (as required), and tapes for the procedure *before* touching the patient.
- Equipment is only opened and prepared when the patient is in their dialysis bed/chair

Preparation of the Machine:

- Hand hygiene **must** be performed *before* lining and set up of the dialysis machine

Preparation of the Patient:

- Hand hygiene **must** be performed *before* preparing the patient.
- Hand hygiene must be performed **again** and gloves donned **immediately** before commencement of any procedure.

Note: Hand hygiene before touching a patient and / or the dialysis machine.

The dialysis machine becomes the “patient” after connection. As a result hand hygiene should be performed before and after touching the machine, but will not be required between touching the machine and touching the patient (as they are considered the one entity).

Needle Site

- Hand hygiene must be performed immediately before and after any manipulation or adjustment of the fistula needles or CVC

Glove Use:

- Gloves are not required for **set up** of machine.
- Gloves should not be applied (unless otherwise indicated) until hand hygiene has been performed IMMEDIATELY prior to performing the 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 the procedure.
- If at anytime there is blood on gloves, immediately remove gloves, perform hand hygiene and apply new gloves.

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.

Cleaning between each patient:

- Any shared equipment **must** be cleaned between every patient.

METHOD:

Cannulation and Connection

1. **Perform Hand Hygiene**
2. Greet patient and start patient preparation, check patient observations, document in chart
3. Set the parameters on the machine
4. **Perform Hand Hygiene**
5. Set up aseptic field & all equipment required for connection to dialysis
6. Loosely apply patient individual tourniquet (if required) and complete patient access assessment
7. Cleanse key site (planned puncture site) with swab
8. Don face shield and apron/gown if not already on
9. **Perform Hand Hygiene**
10. Don gloves, administer local anaesthetic (if required)
11. Tighten tourniquet (**Please see additional notes regarding tourniquet contamination.**)
12. Cannulate or commence CVC procedure
13. Connect to bloodlines and start blood pump
14. Administer anti-coagulant as required
15. Tape bloodlines
16. Clear waste and remove gloves
17. **Perform Hand Hygiene**
18. Adjust machine
19. Check patient observations and document in chart
20. Remove PPE when leaving the patient
21. **Perform Hand Hygiene**

During dialysis

1. **Perform Hand Hygiene**
2. Prepare IV, IM, SC medications as required
3. **Perform Hand Hygiene**
4. Administer IV, IM, SC medications as required, and dispose of waste, or manipulation or adjustment of the fistula needles or CVC
5. **Perform Hand Hygiene**
6. Check patient observations, or touch patient/machine in any way & document in chart
7. **Perform Hand Hygiene**

Disconnection

1. **Perform Hand Hygiene**
2. Set up aseptic field & all equipment required for disconnection from dialysis
3. Prepare patient
4. Don face shield and apron/gown if not already on
5. **Perform Hand Hygiene**
6. Don gloves
7. Commence runback and disconnection procedure as per options below -

Disconnection Procedure Option 1

Disconnect bloodlines

Remove fistula needles, immediate disposal into sharps container

Remove bloodlines and immediate disposal into clinical waste bin

Remove gloves

Perform Hand Hygiene

Disconnection Procedure Option 2

Disconnect and remove bloodlines and immediate disposal into clinical waste bin

Remove gloves

Perform Hand Hygiene

Don gloves

Remove fistula needles, immediate disposal into sharps container

Remove gloves

Perform Hand Hygiene

Site Review and Discharge

1. Don face shield and apron/gown
2. **Perform Hand Hygiene**
3. Don gloves
4. Check needle site for bleeding apply appropriate dressing
5. Remove face shield, apron and doff gloves
6. **Perform Hand Hygiene**
7. Perform patient observations and documentation for patient discharge
8. Clean patient environment
9. **Perform Hand Hygiene**

ADDITIONAL NOTES:

Tourniquets

- Tourniquets should be dedicated to each dialysis patient and stored individually.
- Tourniquets have the potential to become highly contaminated (1). Tourniquets are non-critical items and require thorough cleaning between uses (2).
- Touching an applied tourniquet after performing hand hygiene can re-contaminate the user's hands (with the patient's own skin flora). Tourniquet could be tightened with gauze to limit contamination.

References:

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.