End-Stage Renal Disease Network Program

Back to Basics for Infection Prevention

Surface Disinfection Provider & Patient Resource Guide

Surface Disinfection

It is in these challenging times that we are reminded why cleanliness and surface disinfection is imperative in the prevention of disease transmission. As a result, the IPRO ESRD Network program is releasing a "Back to Basics" campaign. We understand that our Healthcare professionals are working diligently to keep our staff and patients safe during this COVID Pandemic and we have developed this Toolkit to assist with these efforts.

These are resources to share with your staff and patients. Suggestions for opportunities to share these materials would be in your team huddles or staff meetings.

Back to Basics Surface Disinfection Resources

Back to Basics resources include a toolkit of printable resources, audits and educational videos which are aimed at assisting facilities to effectively monitor surface disinfection in their facilities and include patients in the efforts to improve infection prevention.

How do I use these Resources?

The resource titles are ***clickable, and provide access to the website and printable resources***.

Review and become familiar with the resources.

Engage and educate your team on the resources and their purpose:

- Print and share audits with staff and patients.
- Print and share Surface Disinfection resources with staff and patients.
- Observe staff performing surface disinfection and check off steps followed

Engage and educate patients on the resources and their purpose:

- Engage patients on the importance of surface disinfection to prevent transmission of infection.
- Print the CDC Hemodialysis Station routine disinfection audit tool and review how to use the audit with your patients.
- Patients should be encouraged to voice their findings and concerns to staff / QAPI team.
- Partnering and actively engaging patients in their care empowers patients, improves involvement in their care and the likelihood of improved outcomes.

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Surface Disinfection: Resource Links below:

- **Network 1** - http://esrd.ipro.org/wp-content/uploads/2020/09/NW1-Surface-Disinfection-Audit_V1.pdf
- **Network 2 -** http://esrd.ipro.org/wp-content/uploads/2020/09/NW2-Surface-Disinfection-Audit_V2-2.pdf
- **Network 6 -** http://esrd.ipro.org/wp-content/uploads/2020/09/NW6-Surface-Disinfection-Audit_V1.pdf
- **Network 9 -** http://esrd.ipro.org/wp-content/uploads/2020/09/NW9-Surface-Disinfection-Audit_V1.pdf

Conducting practice observations and staff is considered to be best practices in monitoring infection prevention in your facilities. This audit tool is intended to promote effective surface disinfection. Page two of audits contain suggestions for opportunities to share practice observation and audit results would be in your team huddles or staff meetings, and interdisciplinary team meetings.

Note: * Staff audit tool

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Dialysis Audit Tool: Environmental Surface Disinfection

Identify the discipline. * P N T S D	Caregiver selects a EPA approved N-list cleaning agent carrying a blood borne pathogen designation	Moisten cleaning cloth(s) with approved agent	Assess area to be cleansed for visible soil, if soiled wipe surface with first cloth to remove soil	Using second cloth, moisten surfaces to ensure the area is left wet	Caregiver can state contact time for cleaning area	Caregiver waits for surface to dry, allowing for adequate contact time. Surface should not be wiped dry.	Dispose of cleaning cloths or return to soiled laundry hamper	If an area is not thoroughly cleansed using steps 1-7, repeat or remove from service	Process for Surface Disinfection Successful Yes/No

Discipline: **P**=physician, **N**=nurse, **T**=technician, **S**=student, **D**=dietitian, **W**=social worker, **O**=other

Date_____ Time_____ Shift _____ Observer_____
Duration of observation period =_____ minutes
Total number of procedures observed during audit = _____

Surface Disinfection Audit Tool - page 2

Environmental Surface Disinfection Category	Specific Examples	Describe any missed attempts (e.g. during medication prep, between patients, after contamination with blood, etc.)
1. Dialysis Station	• Dialysis station void of patient • Exterior of dialysis machine, all sides, with special attention to touch screen • Keyboards • Dialysate containers (if used) • Dialysis chair • Chairside tables • Blood pressure cuff/ Thermometers • Televisions • Oxygen concentrators/Tanks	
2. Treatment and Medication Preparation Areas	• Countertops • Carts used to store supplies • Medication refrigerators • Shelving in supply storage areas • Charting areas • Physical charts	
3. Commonly Touched Surfaces	• Waiting room chairs • Door knobs • Reception areas • Scales • Countertops surrounding patient Hand Washing stations	
4. Disposal of unused medical supplies if brought into dialysis stations	• Band-Aids • Alcohol wipes • Syringes • Rolls of Tape	
5. Assessment of Cleaning Contractor	• Educated and certified on prevention of transmission of blood borne pathogens • Use of appropriate disinfection agents	

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CDC Audit Tool: Hemodialysis station routine disinfection observations

CDC audit tools and checklists are intended to promote CDC recommended practices for infection prevention in hemodialysis facilities. The audit tools and checklists can be used by individuals when assessing staff practices. They can also be used by staff themselves to guide their practices.

NOTE: * This audit tool is for patients and staff.

*Facility Name:*_____ *Observer:*_____

*Date:*_____ *Day: M W F Tu Th Sa* *Shift: 1st 2nd 3rd 4th* *Start time:*_____ *AM / PM*

Audit Tool: Hemodialysis station routine disinfection observations*

(Use a "√" if action performed correctly, a "Φ" if not performed/ performed incorrectly. If not observed, leave blank. All applicable actions within a row must have "√" for the procedure to be counted as successful.")

*This audit tool applies when there is no visible soil on surfaces at the dialysis station. If visible blood or other soil is present, surfaces must be cleaned prior to disinfection.

Discipline	All supplies removed from station and prime bucket emptied	Gloves removed, hand hygiene performed	Station is empty before disinfection initiated**	New clean gloves worn	Disinfectant applied to all surfaces and prime bucket	All surfaces are wet with disinfectant	All surfaces allowed to dry	Gloves removed, hand hygiene performed	No supplies or patient brought to station until disinfection complete

Discipline: **P**=physician, **N**=nurse, **T**=technician, **S**=student, **O**=other

Duration of observation period: _____

Number of procedures performed correctly = _____

Total number of procedures observed during audit = _____

ADDITIONAL COMMENTS/OBSERVATIONS:

** Ensure the patient has left the dialysis station before disinfection is initiated.

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CDC

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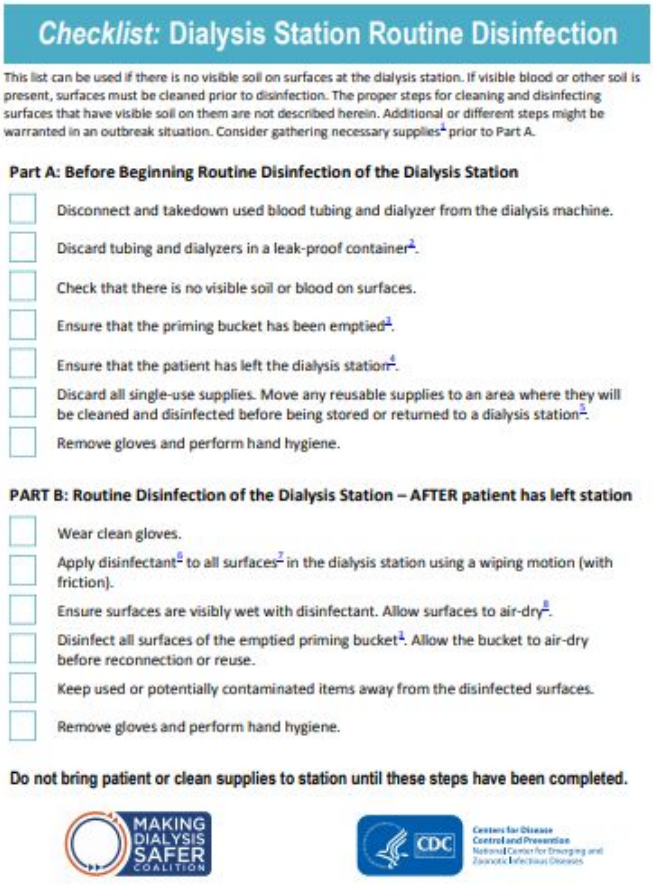
CDC Checklist: Dialysis Station Disinfection

CDC audit tools and checklists are intended to promote CDC recommended practices for infection prevention in hemodialysis facilities. The audit tools and checklists can be used by individuals when assessing staff practices. They can also be used by staff themselves to guide their practices.



Checklist: Dialysis Station Routine Disinfection

This list can be used if there is no visible soil on surfaces at the dialysis station. If visible blood or other soil is present, surfaces must be cleaned prior to disinfection. The proper steps for cleaning and disinfecting surfaces that have visible soil on them are not described herein. Additional or different steps might be warranted in an outbreak situation. Consider gathering necessary supplies[1] prior to Part A.

Part A: Before Beginning Routine Disinfection of the Dialysis Station

- ☐ Disconnect and takedown used blood tubing and dialyzer from the dialysis machine.
- ☐ Discard tubing and dialyzers in a leak-proof container[2].
- ☐ Check that there is no visible soil or blood on surfaces.
- ☐ Ensure that the priming bucket has been emptied[3].
- ☐ Ensure that the patient has left the dialysis station[4].
- ☐ Discard all single-use supplies. Move any reusable supplies to an area where they will be cleaned and disinfected before being stored or returned to a dialysis station[5].
- ☐ Remove gloves and perform hand hygiene.

PART B: Routine Disinfection of the Dialysis Station – AFTER patient has left station

- ☐ Wear clean gloves.
- ☐ Apply disinfectant[6] to all surfaces[7] in the dialysis station using a wiping motion (with friction).
- ☐ Ensure surfaces are visibly wet with disinfectant. Allow surfaces to air-dry[8].
- ☐ Disinfect all surfaces of the emptied priming bucket[3]. Allow the bucket to air-dry before reconnection or reuse.
- ☐ Keep used or potentially contaminated items away from the disinfected surfaces.
- ☐ Remove gloves and perform hand hygiene.

Do not bring patient or clean supplies to station until these steps have been completed.

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Important Notes:

[1] Necessary supplies may include, but are not limited to: leak-proof disposal containers, gloves and other appropriate personal protective equipment (PPE), properly diluted Environmental Protection Agency (EPA)-registered hospital disinfectant, and wipes/clothes.
[2] If used dialyzers and blood tubing are transported out of the station before being discarded, they should be transported in a manner that prevents any leakage.
[3] Perform this step if machine is equipped with a bucket for prime waste. If waste-handling option (WHO) ports are used, separate steps for disinfection are required and are not described here (follow manufacturer's instructions).
[4] Patients should not be removed from the station until they have completed treatment and are clinically stable. If a patient cannot be moved safely, routine disinfection of the dialysis station should be delayed until the station can be vacated in a safe manner. If patients are moved to a separate seating area prior to removing cannulation needles or while trying to achieve hemostasis, the chairs and armrests in those areas must be disinfected in between patients.
[5] Disposal/removal of used supplies may occur before and/or after the patient has departed the station.
[6] Follow the manufacturer's label instructions for proper dilution, preparation, and use of the disinfectant.
[7] Surfaces to disinfect include but are not necessarily limited to: all surfaces in contact with the patient (e.g., dialysis chair, tray tables, blood pressure cuffs) and frequently contacted by healthcare personnel (e.g., control panel; top, front and sides of dialysis machine; touchscreens; countertops; computer keyboards).
[8] Air-drying is recommended to allow for sufficient contact time with the disinfecting agent.

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[Environmental Surface Disinfection in Dialysis Facilities]

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INFECTION PREVENTION Stop the Spread.

Environmental Surface Disinfection in Dialysis Facilities: Notes for Clinical Managers

✓ Select proper disinfectant(s) and determine correct dilution(s) for routine use.

- **Use only Environmental Protection Agency (EPA)-registered hospital disinfectants[a].**
  - EPA-registered hospital disinfectants have label instructions explaining how they should be used in healthcare settings.
  - EPA-registered sodium hypochlorite or other products for healthcare settings are available and are preferred over household bleach products that are not EPA-registered for disinfection of surfaces.
- **Low-level vs. intermediate-level disinfection:**
  - Routine disinfection of environmental surfaces can be accomplished using a low-level disinfectant (any EPA-registered hospital disinfectant). However, intermediate-level disinfectants must be available in the dialysis facility for disinfection of surfaces that are visibly soiled with blood or body fluids.
  - Intermediate-level disinfectants are sufficiently potent to inactivate mycobacteria and have a tuberculocidal label claim, whereas low-level disinfectants are not strong enough to inactivate these bacteria.
  - For convenience, consider selecting and routinely using hospital disinfectants that are tuberculocidal or have label claims of activity against hepatitis B virus (HBV) and human immunodeficiency virus (HIV). These products may be used to perform routine and intermediate-level disinfection.
- **Identify and instruct staff on the correct dilution of the disinfectant agent.**
  - Read the label carefully and follow the manufacturer's label instructions for proper dilution of the disinfectant. Note, label-specified dilutions for EPA-registered sodium hypochlorite (i.e., bleach) products might not necessarily conform to a 1:100 or 1:10 dilution. The manufacturer's instructions are specific to the product and should be followed. Some products do not require preparation or dilution and are sold as "ready to use."
  - Products with tuberculocidal, HBV, and HIV label claims will also have instructions for cleaning blood spills.

✓ Establish procedure for disinfecting dialysis station between patients.

- **Identify responsible staff.**
- **Ensure procedure allows for sufficient disinfectant to be applied to surfaces (surfaces should be visibly wet).**
- **Employ strategies to optimize cleaning and disinfection of the station.**
  - A sufficient patient-free interval is necessary at each station to facilitate adequate cleaning and disinfection. Routine surface disinfection should not commence until the patient has left the station.
  - A facility-wide patient-free interval between treatment shifts should be considered to ensure thorough disinfection of surfaces at the dialysis station and to minimize lapses in infection prevention that can occur when processes are performed in a hurried manner.
  - Routine disinfection of surfaces at the station should occur with *no patient present* to reduce the opportunities for cross-contamination and to avoid exposing patients to disinfectant fumes.
- **Important considerations regarding moving patients to a post-treatment seating area to facilitate more rapid station turnover:**
  - Patients should not be removed from the station until they have completed treatment and are clinically stable. If a patient cannot be moved safely, disinfection of the dialysis station should be delayed until the station can be vacated in a safe manner.

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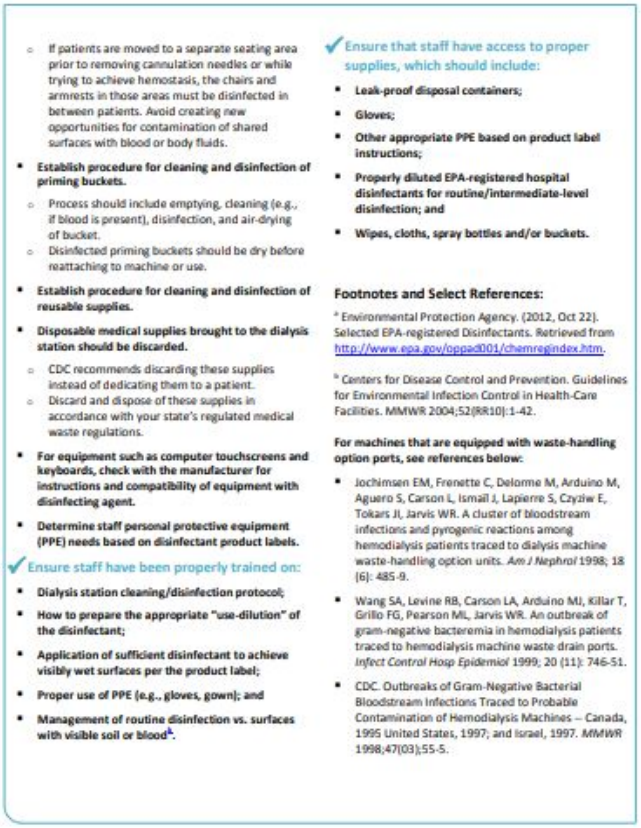

- If patients are moved to a separate seating area prior to removing cannulation needles or while trying to achieve hemostasis, the chairs and armrests in those areas must be disinfected in between patients. Avoid creating new opportunities for contamination of shared surfaces with blood or body fluids.

- **Establish procedure for cleaning and disinfection of priming buckets.**
  - Process should include emptying, cleaning (e.g., if blood is present), disinfection, and air-drying of bucket.
  - Disinfected priming buckets should be dry before reattaching to machine or use.
- **Establish procedure for cleaning and disinfection of reusable supplies.**
- **Disposable medical supplies brought to the dialysis station should be discarded.**
  - CDC recommends discarding these supplies instead of dedicating them to a patient.
  - Discard and dispose of these supplies in accordance with your state's regulated medical waste regulations.
- **For equipment such as computer touchscreens and keyboards, check with the manufacturer for instructions and compatibility of equipment with disinfecting agent.**
- **Determine staff personal protective equipment (PPE) needs based on disinfectant product labels.**

✓ Ensure staff have been properly trained on:

- **Dialysis station cleaning/disinfection protocol;**
- **How to prepare the appropriate "use-dilution" of the disinfectant;**
- **Application of sufficient disinfectant to achieve visibly wet surfaces per the product label;**
- **Proper use of PPE (e.g., gloves, gown); and**
- **Management of routine disinfection vs. surfaces with visible soil or blood[b].**

✓ Ensure that staff have access to proper supplies, which should include:

- **Leak-proof disposal containers;**
- **Gloves;**
- **Other appropriate PPE based on product label instructions;**
- **Properly diluted EPA-registered hospital disinfectants for routine/intermediate-level disinfection; and**
- **Wipes, cloths, spray bottles and/or buckets.**

Footnotes and Select References:

[a] Environmental Protection Agency. (2012, Oct 22). Selected EPA-registered Disinfectants. Retrieved from http://www.epa.gov/oppad001/chemregindex.htm.

[b] Centers for Disease Control and Prevention. Guidelines for Environmental Infection Control in Health-Care Facilities. MMWR 2004;52(RR10):1-42.

For machines that are equipped with waste-handling option ports, see references below:

- Jochimsen EM, Frenette C, Delorme M, Arduino M, Aguero S, Carson L, Ismail J, Lapierre S, Czyziw E, Tokars JI, Jarvis WR. A cluster of bloodstream infections and pyrogenic reactions among hemodialysis patients traced to dialysis machine waste-handling option units. *Am J Nephrol* 1998; 18 (6): 485-9.
- Wang SA, Levine RB, Carson LA, Arduino MJ, Killar T, Grillo FG, Pearson ML, Jarvis WR. An outbreak of gram-negative bacteremia in hemodialysis patients traced to hemodialysis machine waste drain ports. *Infect Control Hosp Epidemiol* 1999; 20 (11): 746-51.
- CDC. Outbreaks of Gram-Negative Bacterial Bloodstream Infections Traced to Probable Contamination of Hemodialysis Machines -- Canada, 1995 United States, 1997; and Israel, 1997. *MMWR* 1998;47(03);55-5.

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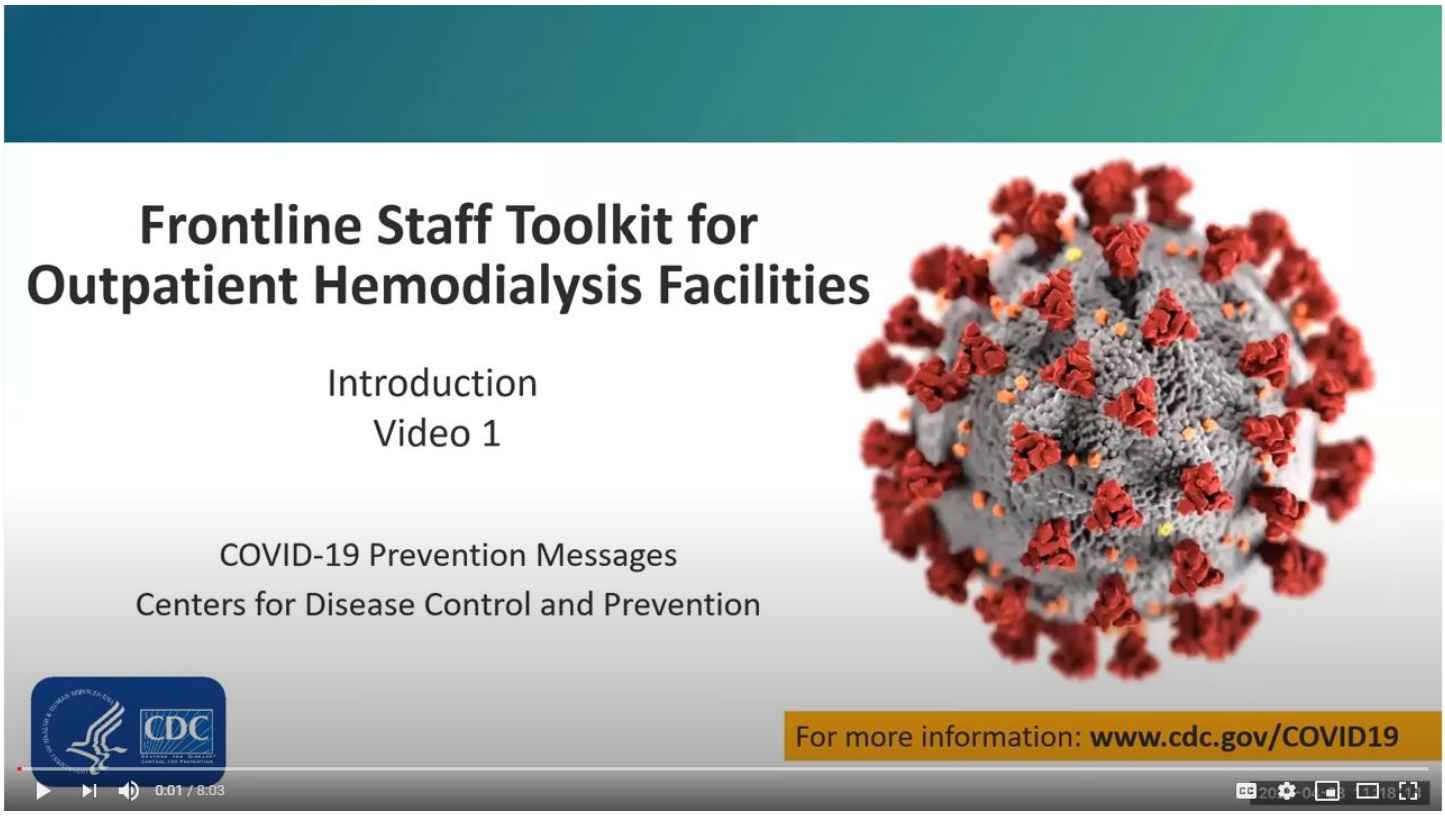
The Frontline Staff Toolkit for Outpatient reviews dialysis station and facility surface disinfection. This training module reviews infection prevention basics and dialysis station and surface disinfection in the dialysis facility.



If I need assistance with the Resource Package, who do I contact?

Contact your ESRD Network for additional information and resources.