

Considerations for Dialysis Centers Before and During a Water Advisory

In most situations, dialysis centers will find themselves with a Boil Water Advisory (BWA), therefore this document will primarily address BWA situations.

Before a Boil Water Advisory

General

- Determine the type of water treatment system used within the dialysis center.
- Develop a plan to notify and educate employees about emergency procedures.
- Create a contact list and numbers of important offices; update annually.
- Consider performing quarterly emergency drills for a drinking water advisory with staff. Include emergency response procedures in new staff orientation.
- Formulate a plan to contact home dialysis patients to disseminate BWA information if needed during active advisory.
- In the event you must stop providing dialysis treatment as a result of potential water quality concerns, develop a plan to ensure that all your patients have access to their needed treatment at alternative locations.

During a Boil Water Advisory

Can we dialyze patients during a Boil Water Advisory (BWA)?

Depending on the water treatment system used, it may or may not be safe to dialyze patients during a BWA:

- If the water treatment components in use are sufficient to remove or destroy bacteria, Reverse Osmosis (RO) will protect the product water from having microbial contamination and is safe to use.
- Deionization (DI) unit does not remove or destroy bacteria, so if DI is being used as the main water treatment (rather than RO), you will need a submicron or endotoxin/ultrafilter downstream of the DI unit.
- If an ultraviolet (UV) irradiator is used, the dialysis filter should be located after the UV irradiator.
- Common treatment devices that have limited or no ability to remove pathogens include: carbon filters, water softeners, ion exchange units, sediment filters, chlorine removers, and aerators. If there is any doubt, consult with your technical staff.
- Do not continue to provide dialysis treatment if you are unsure whether your system is in full compliance with the Association for the Advancement of Medication Instrumentation (AAMI) water quality standards

Close monitoring of the resistivity of the product water will be needed to detect any decrease in quality. Also consider weekly microbial assessment of the product water during the BWA.

Keep in close contact with the Athens-Clarke County Public Utilities Department because they may choose to “shock” treat (hyperchlorinate) their distribution system to bring it back into compliance with the acceptable standards for drinking water. If the city “shocks” their water system, you may see chlorine/chloramine break through. Review your testing procedures with staff and alert them to be vigilant for potential break through so that patients will be protected from exposure to chlorine/chloramine.

Dialysis Centers

Additional Considerations

- All employees with diarrheal illness should be regulated by standard rules of exclusion from work.
- Monitor patients closely for signs and symptoms of gastrointestinal illness.
- Since few dialysis facilities pipe water treated to AMMI standards to their sinks, fountains, hot water tanks, etc., the same precautions appropriate for other medical facilities should be taken to control potential exposures at these locations for patients, the public and staff.

If the Athens-Clarke County Public Utilities Department must treat the water chemically beyond normal levels, advise dialysis units to:

- Sample water for chemical analysis to ensure compliance with AMMI standards.
- Conduct chlorine/chloramine tests to ensure compliance with AAMI standards.
- Monitor water system gauges once per shift.

Can we dialyze patients during a Do Not Drink water advisory?

To determine whether you are able to dialyze patients during a Do Not Drink water advisory, you will need to contact your state toxicologist. The toxicologist will be able to determine whether you may continue to dialyze patients based on your water treatment methods and the specifics of the contaminant or chemical that is responsible for the Do Not Drink advisory.

Your toxicologist will need to first know what water treatment method you use:

- Reverse Osmosis (RO)
- Deionization (DI)
 - If using DI, do you have a submicron or endotoxin/ultrafilter downstream of the DI unit?
- Ultraviolet (UV) irradiator
 - If using UV, is the filter located after the UV irradiator?

Once the toxicologist has an understanding of your treatment methods and the characteristics of the contaminant or chemical in question (e.g., whether it would foul or damage the filter membrane, etc.), they will be able to provide you with further dialysis guidance and recommendations.

In some cases, it might also be necessary to contact manufacturing experts to understand how the contaminant or chemical may affect the dialysis.

Additional Considerations

If the water used for dialysis contains cyanotoxins, dialysis centers may need to provide additional water treatment to remove the cyanotoxins, such as granular activated carbon filtration, membrane filtration, or others depending on the type of cyanotoxins present in the water.

For more information, contact:

Athens-Clarke County Public Utilities Department, 706-613-3481

Get updates at www.accgov.com/publicutilities

Clarke County Health Department, 706-369-5816