

Intent of FMS.08.03

Water quality is essential for the safe and effective delivery of hemodialysis, as those patients may be more vulnerable to infection risk and adverse outcomes.

It is necessary that the processes and procedures used in hemodialysis strictly follow industry standards and professional guidelines for water quality and infection prevention and control measures, such as the Association for the Advancement of Medical Instrumentation (AAMI). This includes but is not limited to testing water used for hemodialysis prior to and during dialysis treatments in accordance with evidence-based guidelines and other authorities, monthly at minimum for bacterial growth and endotoxins, and testing annually at minimum for chemical and other contaminants such as arsenic and heavy metals. It is also important to sample water for testing from both pre- and post-dialysis machine/reverse osmosis treatment unit/filter when required by industry standards and professional guidelines, to ensure that incoming water supply is not contaminated and meets water quality standards and that the machines and reverse osmosis units are performing as expected.

Other actions to ensure appropriate water quality and reduce infection risk in the hemodialysis services include routine disinfection of the water distribution system and testing hemodialysis machines. Frequency for disinfecting the water distribution system depends on such factors as the design of the system and the degree of prevention needed to control bacterial biofilm from forming on the interior of the water pipes.

Water quality treatments and testing results are documented.

When applicable to its services, the hospital establishes and implements procedures for reprocessing dialyzers, such as processes for cleaning, testing, and storing the dialyzers and the frequency for reusing/replacing them.

When problems with water quality are encountered in the hospital, actions are taken to address the problems while maintaining patient safety in the organization. For example, water quality problems may require the hospital to limit certain services or use alternative water sources until the problem is addressed. After the issue is resolved and water quality monitoring demonstrates that the water is safe, the hospital returns to its regular patient care services.

Measurable Elements of FMS.08.03

1. Hemodialysis services in the hospital follow industry standards and professional guidelines for maintaining water quality and implementing infection prevention and control measures.
2. ① Water used in hemodialysis is tested in accordance with evidence-based guidelines prior to and during treatments and evaluated monthly for bacterial growth and endotoxins and evaluated annually for chemical contaminants. The testing results are documented.
3. ① The hospital performs routine disinfection of the hemodialysis water distribution system.
4. ① The hospital conducts testing and evaluation on all hemodialysis machines annually, including machines not in use, and testing results are documented.
5. ① The hospital establishes and implements procedures for reprocessing dialyzers, including, as applicable, frequency for reusing/replacing dialyzers and processes for cleaning and testing dialyzers.

Standard FMS.08.04

The hospital reduces the risk of infection in the facility through the use of mechanical and engineering controls.

Intent of FMS.08.04

Engineering controls, such as positive and negative pressure ventilation systems, biological hoods in laboratories, and thermostats on refrigeration units and on water heaters used to sterilize dishes and kitchen equipment, are examples of how environmental standards and controls contribute to good sanitation and the reduction of infection risks in the hospital.

Positive pressure ventilation systems are used in protective areas of the hospital that require the highest level of cleanliness; for example, operating theatres, sterile storage areas, and rooms for immunocompromised patients. Positive pressure ventilation ensures that air is directed out of the area, minimizing the likelihood that microorganisms are introduced into the environment.

Hospitals identify and follow local and national laws and regulations and professional standards regarding the use and maintenance of positive pressure ventilation systems.

Proper water and steam temperatures are required to prevent the growth of microorganisms and to successfully carry out cleaning, disinfection, and sterilization procedures. Hospital leaders consult local and national laws and regulations, as well as professional guidelines, to determine appropriate water and steam temperatures to minimize the likelihood of infection transmission through water. In addition, hospital leaders ensure that water and steam reach the necessary temperatures for the proper duration to effectively carry out any cleaning, disinfection, or sterilization process; for example, proper water temperature for dishwashing and steam temperatures for autoclaving.

The hospital operates and maintains airflow, ventilation systems, and humidity controls to maintain indoor air quality. This includes maintaining heating, ventilating, and air-conditioning (HVAC) systems in a manner that minimizes infection risks to patients, staff, and visitors. Airborne contaminants can be spread through exhaust, through general ventilation, and during cleaning. Maintenance of airflow and ventilation systems can minimize this risk. Operation and maintenance are completed in accordance with local and national laws and regulations and professional guidelines and include proper maintenance of inlets, outlets, fans, filters, diffusers, ductwork, humidifiers, and so on.

Measurable Elements of FMS.08.04

1. The hospital operates and maintains negative and positive pressure ventilation systems in accordance with local and national laws and regulations and professional standards.
2. The hospital operates and maintains temperature controls for water, steam, and others in accordance with local and national laws and regulations and professional standards.
3. The hospital operates and maintains airflow, ventilation systems, and humidity controls in a manner that minimizes infection risk in the hospital in accordance with local and national laws and regulations and professional guidelines.

Emergency and Disaster Management

Standard FMS.09.00

The hospital develops, maintains, and evaluates an emergency management program to respond to internal and external emergencies and disasters that have the potential of occurring within the hospital and community.

Intent of FMS.09.00

Community emergencies and disasters may directly involve the hospital, such as damage to patient care areas as a result of an earthquake, tsunami, or terrorist attack that keeps staff from coming to work. To plan, prepare, and respond effectively to emergencies and disasters, the hospital develops and implements an emergency and disaster management program.

The development of the program begins by identifying the types of emergencies and disasters that are likely to occur in the hospital's region (for example, earthquakes, typhoons, floods, landslides, explosions) and the impact these emergencies and disasters would have on the hospital. For example, a hurricane or tsunami is more likely to occur in areas where the ocean is near; however, facility damage or mass casualties as a result