Standard FMS.08.02

Designated individuals or authorities monitor water quality regularly.

Intent of FMS.08.02

Water quality is prone to sudden change, including changes outside the control of the hospital. It is imperative for hospitals to maintain water quality, as it is a crucial factor in clinical care processes, including dental procedures and hemodialysis. Thus, the hospital establishes a process to monitor and maintain water quality and implements actions when water quality is found to be unsafe.

The number of sites tested for water quality is determined by the hospital based on its own risk assessment. Testing of potable and/or non-potable water is conducted regularly. The frequency of testing can be based on any or all of the following:

- Local laws and regulations
- Conditions of the sources for water
- Previous experience with water quality problems

The testing can be carried out by individuals designated by the hospital, such as staff from the clinical laboratory, or by public health or water control authorities outside the hospital, or others judged competent to perform such tests. Whether performed by qualified hospital staff or by authorities outside the hospital, or other qualified individuals, it is the responsibility of the hospital to ensure that the testing is completed and documented.

In addition to testing water quality, to prevent and reduce the risks of contamination and growth of bacteria such as *Escherichia coli*, *Legionella*, and many others, guidance is sought from the hospital's infection prevention and control program as well as data from water quality–related patient adverse events. These sources help inform whether actions should be taken, such as preventive measures, to reduce the risk of contamination and growth of bacteria.

Water is an integral part of dental care. Hospitals that provide dental services take measures to ensure that the water used in dental treatments and procedures is safe. This includes following manufacturer's guidelines for treating and testing dental unit waterlines. The hospital ensures that dental staff are trained and understand the dental unit waterline treating and testing requirements and procedures.

Measurable Elements of FMS.08.02

1. Ⓓ Quality of potable water is tested and evaluated at least quarterly or more frequently in accordance with laws and regulations, conditions of the sources for water, and previous experience with water quality problems. The testing results are documented.
2. Ⓓ Quality of non-potable water is tested and evaluated at least every six (6) months or more frequently based on local laws and regulations, conditions of the sources for water, and previous experience with water quality problems. The testing results are documented.
3. Preventive measures and strategies are implemented to reduce the risks of contamination and growth of bacteria in water.
4. Ⓓ Dental unit waterlines are treated, tested, and evaluated according to manufacturer's guidelines, and treatments and testing are documented.

Standard FMS.08.03

Quality of water used in hemodialysis is tested and evaluated for chemical, bacterial, and endotoxin contaminants, and processes for hemodialysis services follow professional standards for water quality and for infection prevention and control.

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. Ⓓ 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. Ⓓ The hospital performs routine disinfection of the hemodialysis water distribution system.
4. Ⓓ The hospital conducts testing and evaluation on all hemodialysis machines annually, including machines not in use, and testing results are documented.
5. Ⓓ 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.