

## WATERBORNE PATHOGEN HEALTH RISK & SOLUTIONS

### Problems in water

Clean water is one of the most important resources used every day for patients in healthcare settings and residents of Adult Living Facilities (ALF). Despite extensive purification at water treatment facilities, upon entering municipal distribution pipes, water can become contaminated after contact with biofilms. Biofilms are bacterial communities that result from ideal growth conditions such as warm, stagnant water found in dead legs. These bacterial communities are heat and chemical resistant making complete removal of biofilms nearly impossible through disinfection and flushing methods.

### Biofilms and Bacteria

The microorganisms that shed from biofilms are typically in small enough concentrations that healthy individuals are not at risk of infection. However, these microbes present a danger to at-risk individuals such as the immunocompromised or elderly. To these at-risk populations, opportunistic waterborne pathogens such as *Pseudomonas aeruginosa*, *Non-Tuberculosis Mycobacterium (NTM)*, and *Legionella pneumophila* can cause serious infection or even death. Additionally, with the emergence of multidrug-resistant organisms (MDROs), the risk of health complications if infected is much higher. It is critical for facilities to ensure a high standard of water quality.

### Challenges in healthcare and beyond

In the healthcare and lifecare field, caretakers and providers must face the challenge of nosocomial infection from waterborne pathogens. Around 7% of all healthcare associated infections result from *P. Aeruginosa* while the incidence of Legionellosis has more than tripled between 2007 and 2018 (1)(2). A comprehensive plan of action is required by the new water management standard for hospitals, critical access hospitals, and nursing care centers (EC.02.05.02, EPs 1 through 4) (3). While there are several methods to approach a bacterial contamination event, POU filtration is a simple, immediate, and cost-effective solution that does not compromise safety.

SEE Resources – Legionella 101 & List of Waterborne Pathogens

### Point-of-Use Solutions

For more than a decade, Point-of-Use (POU) filtration has been established as a successful method for infection prevention by providing a critical barrier between waterborne pathogens and at-risk individuals (4). POU filters can be installed quickly, minimizing interference of regular operations while maintaining the safety of occupants. Whether you are planning proactive measures for your water management plan or responding to an active emergency, POU filtration provides confidence and reliability when defending against waterborne pathogens.

## AQM commitment

AquaMedix has been providing POU filters to deliver clean water to healthcare facilities for over 10 years. With high-performance membrane technology tested to industry standards (ASTM F838 >7 log reduction) and designed to fit the needs of customers, AquaMedix is a leader in infection prevention through POU filtration. Combined with longer filter lifetime and a range of installation kits that make responding to water quality emergencies easier, AquaMedix can help keep your facility safe and provide guidance and support in the instance of an outbreak. If you are responsible for your facilities' water management plan or have concerns about your facilities' water system, contact us today to learn more about how POU filters fit into your water management plan.

## References

- (1). Reynolds, D., Kollef, M. "The Epidemiology and Pathogenesis and Treatment of *P. Aeruginosa* Infections: An Update". *Drugs*. V. 81. P. 2117-2131. 2021. DOI: <https://doi.org/10.1007/s40265-021-01635-6>
- (2). Gleason, Jessie A., Cohn, Perry D., "A review of legionnaires' disease and public water systems – Scientific considerations, uncertainties and recommendations". *International Journal of Hygiene and Environmental Health*. V. 240, March 2022. DOI: <https://doi.org/10.1016/j.ijheh.2021.113906>
- (3). The Joint Commission (2021). New Standard for Water Management Program – Hospitals, Critical Access Hospitals, and Nursing Care Centers. (EC.02.05.02, EP1-4). [https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3-report-water-management-final\\_nov1.pdf](https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3-report-water-management-final_nov1.pdf)
- (4). Sheffer, Patricia J., Stout, Janet E., Wagener, Marilyn M., Muder, Robert R. "Efficacy of new point-of-use water filter for preventing exposure to Legionella and waterborne bacteria". *American Journal of Infection Control*. V. 33, I. 5, June 2005. P. S20-S25. DOI: 10.1016/j.ajic.2005.03.012

**For Use In:** hospitals, clinics, and other medical facilities such as skilled nursing and adult care facilities. Recommended for areas at high-risk for hospital-acquired infections (HAIs) such as ICU, neonatal, oncology, burn, and transplant units.

## About AquaMedix

AquaMedix develops, manufactures, and distributes point-of-use (POU) and inline filtration systems designed to protect against waterborne bacteria. Proprietary filters trap potentially lethal pathogenic bacteria such as Legionella, Pseudomonas, Acinetobacter, Nontuberculous Mycobacterium, and Stenotrophomonas. In addition to selling a complete line of CleanSpray POU and inline filtration systems, AquaMedix is the U.S. Master Distributor for Baclyser POU and inline filters by Aqua free.

Our products include shower and faucet filters as well as standard and specialty inline filters to protect water used in ice machines, coffee machines, dental office sprayers, and other appliances. AquaMedix products are easy to install and maintain without large capital expenses or the need for costly chemicals, machinery, or special training. With filters installed nationwide in healthcare facilities, AquaMedix is positioned to address infection control concerns with a variety of innovative and cost-effective products.

