

Is There A Legal Standard Of Care For Legionnaires' Disease?

By **Thomas Bernier**

Since it was first identified and named following the 1976 outbreak in Philadelphia, Legionnaires' disease has quietly grown into a major health concern throughout the United States.

In August 2019, the National Academies of Sciences, Engineering and Medicine, or NASEM, estimated that the number of actual cases may now be as high as 70,000 per year. With a mortality rate in some populations reaching 25%, and many survivors left with permanent disabilities, the number of associated personal injury cases has also burgeoned.[1]

Along with these trends, public health professionals and courts alike have struggled to identify a standard of care for water management that will prevent future cases of illness — and to provide premises owners and managers with guidance on what protocols the law views as necessary to prevent or mitigate liability.

In the past five years, numerous guidelines, a purported code-adoptable standard and even statutory regulations have been promulgated to stem the tide of cases. Courts are now being challenged to decide which, if any, of these provisions rises to the level of a legal standard of care.

This article discusses specific aspects of Legionnaires' disease including its cause, diagnosis, effects and incidence. It will further review the numerous protocols adopted to prevent it, and the data kept to determine if in fact these protocols are having the desired effect. Lastly, it will review whether any of the recent public health recommendations have made a significant enough difference to merit consideration as a legal standard of care.

As explained in further detail below, the rush to establish such a legal standard may be outpacing the data on the efficacy of even the most detailed water management requirements — and courts may want to hesitate before endorsing any specific protocol as a standard of care, the breach of which would establish negligence.

Legionella pneumophila bacteria is the proven cause of Legionnaires' disease. The disease was first identified in 1976, following the infamous outbreak at the Bellevue Stratford Hotel in Philadelphia, which sickened over 220 and killed 34 American Legionnaires attending a convention celebrating the bicentennial.

Legionnaires' disease is a severe pneumonia with accompanying cough, high fever, nausea, vomiting, diarrhea and shortness of breath.[2] The average mortality rate is 10% for those diagnosed. In certain hospital settings, the mortality rate has reached 25%. Those surviving the disease may sustain serious permanent injury following prolonged sepsis and organ failure.



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A less severe form of legionella infection, called Pontiac fever, does not result in pneumonia and usually resolves without medical intervention. Legionnaires' disease and Pontiac fever collectively comprise Legionellosis.[3]

Legionella bacteria is waterborne and common to all forms of water. It is even present at very low levels in municipal water. In most circumstances, legionella exists at such low concentrations that it will not cause disease. However, certain conditions, including stagnation and water temperatures in the range of 90 to 115 degrees Fahrenheit, allow background levels of bacteria to amplify rapidly to levels sufficient to constitute an immediate health risk.

Sediment in water, along with biofilm on surfaces storing or transporting it, serve as food sources promoting amplification of legionella. But even at high concentrations, legionella does not threaten human health until it is aerosolized within a mist of water droplets fine enough to allow inhalation into the lungs, where it gains an infectious foothold.

Recognized sources of aerosolization are cooling towers, showerheads, faucets, fountains, swimming pools, hot tubs, humidifiers, misters and medical respiratory devices.[4] Hotels, condominiums, restaurants, grocery stores, hospitals, senior living facilities, health spas, fitness centers and any large building with a centralized potable water system are potential sites for amplification of legionella.

Even when amplified, the attack rate upon exposure is 5%. Immunocompromised individuals — such as the elderly, smokers, and those with kidney disease, obesity, diabetes and cancer — are most at risk. Following exposure, symptoms generally appear within two to 14 days. Legionellosis is not a contagious disease, and is not spread between people.[5]

Since 1976, Legionellosis has been a reportable disease, requiring health practitioners to report each diagnosis to local and state health departments. Larger outbreaks often invite participation from the U.S. Centers for Disease Control and Prevention. Numerous international and national agencies, along with countless industry associations, have published guidelines on the control of the amplification of legionella bacteria. Yet, 43 years after the seminal occurrence at the Bellevue Stratford, outbreaks continue to make national news headlines.

This summer, major outbreaks at a hotel in Atlanta, Georgia,[6] and at a state fair in Fletcher, North Carolina,[7] combined to afflict almost 200 people and cause three deaths. At least one lawsuit related to the Atlanta outbreak has already been filed.

Smaller outbreaks were also investigated, including 13 residents diagnosed in September in a Batavia, Illinois, retirement community; 16 cases diagnosed in July in Moncton, New Jersey; and 16 patients sickened, with one fatality, in a Columbus, Ohio, hospital.[8]

Particularly alarming is data indicating that although it is the outbreaks that make news, 95% of the reported cases are sporadic and unrelated to an outbreak. The number of Legionnaires' cases reported to the CDC has been on the rise since 2000. In 2009, doctors reported 3,500 cases, contributing to a 350% increase in the case rate from 2000-15. In 2016, that number jumped to 6,100.

The most recent statistics, from 2018, show over 8,300 reported cases. The CDC estimates that between 8,000-18,000 persons are hospitalized each year, with 10,000 cases per year being the best estimate. In August, NASEM stated that it believes the number of cases is grossly underestimated, and actually falls between 54,000-70,000.[9]

These rising numbers have caught the attention of public health officials in the United States and worldwide, including at the World Health Organization, the British Health Service Executive, the U.S. Environmental Protection Agency, the U.S. Occupational Safety and Health Administration, the CDC and the U.S. Department of Veteran's Affairs. Private industry associations have also weighed in on the prevention of Legionellosis, with specific emphasis on the American Society of Heating, Refrigerating & Air Conditioning Engineers, or ASHRAE, Standard 188, published in 2015 and revised last year.[10]

In June 2017, the CDC published a toolkit for developing a water management program to reduce legionella growth and spread in buildings, stating that "legionella water management programs are now an industry standard for large buildings in the United States," and citing ASHRAE Standard 188 for this proposition.[11] ASHRAE Standard 188, which subjected itself to the American National Standards Institute accreditation process over a period of several years, touts itself as the first code-adoptable standard for the prevention of Legionellosis.

In 2016, following a large outbreak traced to a cooling tower in the Bronx, both New York City and New York state adopted regulations requiring the registration of all cooling towers, as well as regular testing of cooling tower water specifically for the presence of legionella.[12]

In June 2017 and July 2018, the U.S. Centers for Medicare and Medicaid Services — concerned with the increasing incidence of Legionellosis in the nursing home and assisted living facility settings — issued memoranda clarifying its expectations for mitigation of legionella risks.[13] Specifically, CMS explained that its requirement to reduce legionella risks in health-care facility water systems included hospitals and long-term care facilities.[14]

In August 2019, NASEM released its report on the management of Legionella in water systems, which endeavored to address "the state of the science with regard to legionella including its ecology, disease diagnosis, amplification within water systems, quantification, prevention, control, policy, and guidance and all associated research needs." [15]

Historically, appellate courts have exhibited an unwillingness to accept advisory guidelines on legionella management as rising to the level of a standard of care.[16] These appellate reviews, however, preceded publication of ASHRAE Standard 188, the New York cooling tower regulations, the NASEM 2019 publication and the recent endorsements of the CDC and CMS. Still, as of October 2019, no published appellate opinions could be found discussing ASHRAE Standard 188 as a potential definitive standard of care for the prevention of legionella amplification.

Given the rising incidence of Legionellosis and its associated harm, it is no coincidence that the number of personal injury claims and lawsuits is increasing as well. Health departments commence outbreak investigations when the diagnosis of more than one case of Legionellosis is associated with a particular location. Property owners and facility managers often become aware of a potential outbreak for the first time only when they are notified by health department investigators.

Once a property ownership entity is notified of a suspected outbreak, it is often required to issue a public health notice to individuals such as patients, tenants, guests and anyone who visited the suspected premises during the calculated exposure window. Not surprisingly, these notices result in additional people coming forward, thereby spawning more third-party

claims for personal injury. Additionally, public health notices, negative media attention and building shutdowns expose premises' owners to large claims for business interruption.

Increasingly, personal injury recoveries based upon alleged legionella exposures have become a more attainable target for the plaintiffs bar. With the growing number of guidelines and regulations, and a purported standard in ASHRAE Standard 188, plaintiffs attorneys may find it less difficult to establish what they argue as the standard of care in the prevention of legionella amplification in a building that causes an exposure and illness.

Many cases resolve with confidential settlement agreements. Reported settlements and jury awards for personal injury range from \$50,000 to \$6 million. A survey of reported settlements and verdicts for the past five years lends support to the proposition that plaintiffs pursuing legionella-based causes of action are finding success.

In 2012, an outbreak was traced to a fountain in the lobby of the J.W. Marriott Hotel in Chicago, Illinois. In two separate trials in 2014 and 2017 arising out of that outbreak, jurors awarded plaintiffs \$2,268,575 and \$3,800,000 respectively.[17] In March 2017, a federal judge entered judgment of \$310,000 in favor of a student at a maritime academy who developed Legionnaires' disease he associated with a clogged drain on board a vessel he was servicing.[18]

In 2015, a case was filed on behalf of a patron who claimed to have contracted Legionnaires' disease after using a therapy pool at a hotel in Peoria, Illinois. That case was settled in 2017 for \$300,000.[19] In another matter concluded in 2017, a plaintiff received a settlement of \$50,000 related to his diagnosis with Legionnaires' disease, allegedly connected to his use of whirlpool spa as a guest in a Virginia hotel.[20]

But while potential litigants and courts are following with interest the growing number of regulations and guidelines related to the control of legionellosis — including the New York statutes and ASHRAE Standard 188 — in hopes that some definitive and effective standard of care will emerge, the latest scientific data appears to be signaling otherwise.

New York state reported 128 cases within the state during a three-week period in 2018, accounting for 37% of the 348 cases reported nationwide over that same period. The reporting data for New York strongly suggests that despite all of the recent attempts to reduce the incidence of Legionnaires' disease, 2018 will exceed the previous record for reported cases set in 2017.

As mentioned above, the number of reported cases nationwide has steadily grown year after year, and exceeded 8,300 in 2018, years after these guidelines and regulations have been implemented. As of this month, preliminary data from the CDC shows that 5,563 cases have already been diagnosed this year.[21] It would appear that these programs are not having the desired effect, or that the data is insufficient and more study is needed.

In either event, litigants, experts and courts should proceed with caution before anointing any guideline, standard, regulation or policy as the definitive standard of care by which to hold premises owners, facility managers and water management professionals liable for any diagnosis of Legionnaires' disease.

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[1] National Academies of Sciences, Engineering, and Medicine 2019. Management of Legionella in Water Systems. Washington, DC: The National Academies Press, <http://doi.org/10.17226/25474>.

[2] <http://cdc.gov/legionella/about/index.html>.

[3] Id.

[4] Id.

[5] Id.

[6] <http://usatoday.com/story/travel/hotels/2019/08/12/sheraton-atlanta-hotel-legionnaires-disease-outbreak-1-dead/1990663001>.

[7] <http://usatoday.com/story/news/nation/2019/10/10/legionnaires-disease-claims-2nd-victim-linked-mountain-state-fair/3939049002>.

[8] <http://hcinfor.com/about/outbreaks/recent>.

[9] National Academies of Sciences, Engineering, and Medicine 2019. Management of Legionella in Water Systems. Washington, DC: The National Academies Press, <http://doi.org/10.17226/25474>.

[10] ANSI/ASHRAE 188-2018; Legionellosis: Risk Management for Building Water Systems. The latest edition of an ASHRAE standard may be purchased from the ASHRAE website (<http://www.ashrae.org>) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305.

[11] Developing a Water Management Program to Reduce Legionella Growth & Spread in Buildings: A Practical Guide to Implementing Industry Standards, <http://cdc.gov/legionella/WMPtoolkit>.

[12] <http://nyc.gov/html/dob/downloads/pdf/1177of2015.pdf>.

[13] A review of Legionnaires' disease outbreaks between 2000-14 revealed that 34% were associated with hospitals or long-term care facilities.

[14] <http://cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/QSO17-30-HospitalCAH-NH-REVISED.pdf>.

[15] National Academies of Sciences, Engineering, and Medicine 2019. Management of Legionella in Water Systems. Washington, DC: The National Academies Press, <http://doi.org/10.17226/25474>, Preface, page vii.

[16] *Vellucci v. Allstate Ins. Co.*, 431 N.J. Super. 39, 66 A.3d 215 (2013), and *Flaherty v. Legum & Norman Realty Inc.*, Civil Action No. 1:05-1492, 2007 WL 4694346 (E.D. Va. Jan.

4, 2007), aff'd 281 F. App'x 232, 2008 WL 2385491 (4th Cir. 2008); see also Gross et al. v. Baltimore Aircoil Company Inc., 2016, WL 10607176 (USDC, S.D. Mississippi, Northern Division) (holding that best practices are not the standard of care under a negligence theory).

[17] Acevedo as Special Administrator of the Estate of Luis Enrique Acevedo Muro v. Marriott International Inc., Case #: 1:13-cv-06441; USDC, N.D. Illinois; JVR No. 1405120004; 2014 WL 2465897 (N.D. Ill.); Schoenfeld v. Marriott International Inc., 2012-L-012868; Circuit Court of Illinois, Cook County Judicial Circuit; JVR No. 1704060023, 2017 WL 1294896 (Ill. Cir. Ct.).

[18] Higgins v. Laborde Marine Management LLC, 2:16CV12529; USDC, E.D. Louisiana; JVR No. 1805010042, 2018 WL 2560967 (E.D. La.).

[19] Estate of Larson v. Johnson, Peoria Ventures LLC, 2015-L-000596; JVR No. 1809170013, 2017 WL 10243118 (Ill. Cir. Ct.).

[20] Diretto, Individually and as Personal Representative of Neely v. Country Inn & Suites by Carlson; Sun Group Management LLC; USDC, E.D. Va. Case No.: 1:16CV01037; JVR NO. 1801110041, 2017 WL 6997857 (E.D. Va.).

[21] <http://wonder.cdc.gov/nndss/static/2019/40/2019-40-table1u.html>.