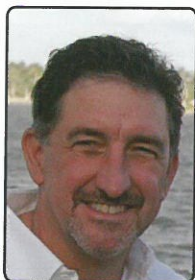


What is the pool service's role in Legionella?

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Yikes, yet another health threat to consider? Legionella concerns are everywhere; how do you protect yourself and your pool service customer?

Legionella outbreaks (reported) have increased 400% since the year 2000, and many are starting to take notice. Major hotel corporations are requiring proactive action, and some unfortunate companies (Jan. 2017 LA Fitness in NY) are making headlines with outbreaks (links listed below).

What is Legionella?

It is bacteria, found in water, that causes serious respiratory illnesses, referred to as legionellosis. It is NOT spread from person to person, but can be dispersed very quickly with the SPRAY from aerated bodies of water like hot tubs, Interactive Water Features (IWF), waterfalls, and non-pool applications like cooling towers, misters and humidifiers. Legionnaires disease can be fatal. Persons with increased risks include those over 50, and those with compromised immune systems, chronic lung disease, etc. But the disease can also affect seemingly healthy patrons as well. Symptoms include headache, confusion, fever, chills, shortness of breath, muscle or body aches, nausea, vomiting and diarrhea. Not nice to say the least.

Where can it come from?

The CDC Legionella Toolkit (link below) demonstrates the many places in your customer's BUILDING where Legionella can form including source water, pipes, storage tanks, water heaters, etc. But people don't swim in water tanks, so the growth and spread of the bacteria tends to show up in fountains, IWF's, pools (with aeration) and hot tubs. Now it is your problem. It almost makes sense that the most scrutiny for spread of bacteria would

come from the aquatic venue or lobby where there are the most people, even if the problem was developed elsewhere in the building.

What you can do to protect yourself and your patrons?

The CDC toolkit is full of examples and solutions. Here are a few for consideration:

- Identify and consider the risk for fountains (interior and exterior).
 - Propose and provide a reliable "ongoing" treatment (controls and treatment or chlorination) program that helps prevent biofilm and Legionella. Many fountains use the "wait and shock" program, but since they have been identified as a ready source for breeding and spreading Legionella one must be more proactive.
- Make sure that your spa systems are in good shape.
 - Another leading source for problems, most spa systems require a 24/7 automated control system per code. If your customer is not operable or reliable then it is your responsibility to report and to suggest a solution.
 - Some major corporations are mandating that their hotels add UV to spas to proactively protect against Legionella claims.
- IWF's are under the microscope as well.
 - Some IWF's are required to have UV in order to prevent spread of crypto, but they are also a major potential culprit with Legionella. DOH codes required UV on most feature loops, but allowed a "glitch" alternate for full flow filtration. Unfortunately filtration won't filter Crypto and won't fully handle Legionella. The DOH now resolved the "glitch" and will soon require IWF's

with full flow filtration to also be equipped with UV – albeit less costly, non-validated units. The service company can educate and warn their customer of this requirement (to reduce your liability) and get the ball rolling on a future conversion.

- Go above and beyond:
 - The CDC toolkit recommends continual monitoring, rapid identification of broken chlorination systems, and responsive corrective action to fix. Seems like a good control and alert notification program might be helpful in achieving this goal.
 - Think ahead. Periodic and proactive preventive maintenance on mechanical systems can also help keep you out of trouble.
 - Proactive bacteria testing as part of your pool service might help further bulletproof your company from liability issues. These are all good steps toward a total solution.

Since Florida is a shared culpability state - which means that you can be sued and ordered to pay lots of money even if something wasn't your fault – it makes sense for the pool service company to be proactive with their customers in order to avoid short and long-term issues. If you propose a solution and your customer decides to do nothing, you are still better off than if you quietly look the other way.

2017 LA Fitness in NY
(http://ceswaterquality.com/files/NY_LA_Fitness_Legionella_Outbreak_2017.pdf)

CDC Legionella Toolkit
(http://ceswaterquality.com/files/CDC_Legionella_Toolkit_2017.pdf)