Legionnaires and Other Workplace Infectious Diseases

Insights
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Employers do not often worry about the respiratory illness, Legionnaires Disease, but the occurrences have increased five-fold since 2000, and experts are unsure as to the reasons. OSHA takes Legionnaires Disease seriously and maintains a page on its www.OSHA.gov site. OSHA notes that Legionnaires Disease occurs in certain common workplace settings:

Improperly maintained water systems, such as domestic or industrial water systems or large HVAC systems, are among the leading sources of worker exposure to the bacteria that cause Legionnaires' disease.

Legionella bacteria are more likely to become suspended in the air (i.e., aerosolized) when the water is part of a system that includes the water's passing through components such as cooling towers, shower heads, and faucets. Once aerosolized, there is a risk for worker exposure that could result in Legionellosis.

Legionellosis outbreaks in workplaces are commonly attributable to *Legionella* growth in poorly maintained manmade water systems, such as:

- Cooling towers, evaporative condensers, and fluid coolers using evaporation to remove heat.
- Potable water systems and domestic hot water systems.
- Humidifiers, misters, foggers, and decorative or display fountains creating water spray.
- Spas, whirlpools, and hot tubs.
- Cooling misters, produce misters[1], and evaporative coolers.
- Industrial processes creating aerosolized water (e.g., cooling sprays or tanks and water-based fluids used as coolants during cutting and fabrication.

The CDC's *Legionella Environmental Assessment Form* guides employers through assessing facility water systems, determining whether *Legionella* environmental sampling is required, and developing a sampling plan.

OSHA recommends that when conducting a hazard assessment, pay special attention to:

- Locations in the water systems where water may stagnate, such as storage tanks, and components that have been isolated and no longer maintain a significant flow of water. (Known as "dead legs"), or infrequently used faucets.
- Hot water recirculation systems.
- Side-stream plumbing equipment not experiencing regular flow, such as expansion tanks, hammer arrestors, or by-pass lines.
- Cross-connections between domestic and process water systems.
- Backflow prevention devices.

The instructional video "Conducting and Interpreting the Environmental Assessment" describes useful steps for conducting Legionella-focused hazard assessments.

Do not overlook this concern in your site safety analysis and your Job Safety Analysis (JSA).

Other Workplace Infectious Disease Issues.
Not surprisingly, given what's going on globally, employers are increasingly challenged with new infectious disease issues ranging from MRSA to flu and pandemics. We recently wrote about TB concerns, *Blast From the Past? Handling Tuberculosis Fears in The Modern Workplace.*

Employers do not need to panic but they do need to realize that infectious diseases are not limited to healthcare settings. A recent CDC Report, *Emerging Infectious Diseases*, discussed California solar panel installers who contracted Valley Fever, spa maintenance workers who were exposed to *Mycobacterium avium* and a lawn care worker who suffered from zoonotic disease.

The February, 2019 article, Workplace Infection Risks Evolving, Employers Struggle to Keep Up discussed the variety of issues facing employers:

Moreover, it's not just workers in the health care industry who face the risk of workplace infection; the risk is widespread across industries, and sometimes in surprising places.

The new CDC report was published this month in *Emerging Infectious Diseases*. It examines existing literature about infectious diseases in the workplace, finding 66 investigations of workplace infection cases between the years 2006 and 2015. In addition to health care, the industries most at risk for workplace infections include laboratories, especially work involving animals, and public service work

Follow public health and NIOSH updates and always consider the setting and the possibility of unusual threats.

Do not overlook infectious disease concerns in conducting your site safety analysis and preparing Job Safety Analysis (JSA).

Resources.

NIOSH

CDC

OSHA Seasonal Flu/Influenza page.

OSHA MRSA page.

Related People

Howard A. Mavity
Partner
404.240.4204
Email

Service Focus

Workplace Safety and Catastrophe Management