Keeping Your Workforce Healthy

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The Center for Disease Control and Prevention reports that each year, on average, more than 200,000 people are hospitalized and 36,000 people die from seasonal flu complications in the U.S.

And it's predicted that this flu season could be worse because there is a new and very different influenza virus causing illness called 2009 H1N1. CDC expects both 2009 H1N1 flu and seasonal flu to cause illness, hospital stays and deaths this season and is preparing for an early and possibly severe flu season.

In fact, the flu season is well underway, with the CDC issuing a weekly report that shows seasonal flu cases have elevated in all regions of the U.S.

Employers can help minimize the spread of influenza and its impact on their businesses in a variety of ways. The CDC recommends businesses encourage their employees to improve hand hygiene, cover coughs and sneezes, clean surfaces and items that are more likely to have frequent hand contact, to get vaccinated and advise sick workers to stay home.

But sick workers are not the only way influenza can spread from person to person. To further reduce the spread of influenza, manufacturers should take a close look at their building systems as well. Louis J. Ronsivalli Jr., Service Offers Development Leader for Trane's commercial systems offers advice on how manufacturer's heating and cooling systems can help prevent the spread of influenza.

Many areas of a building can contribute to the spread of the disease. According to the EPA, there is a direct correlation between low indoor humidity in the winter months and increases in influenza. Therefore, any place where indoor humidity is low is a likely problem area.

"Cooling towers, pooled water on roofs or clogged drains that can harbor unhealthy contaminants that can be introduced into the building and circulated by the air distribution systems into the occupied spaces are also areas of concern," says Ronsivalli.

Proper maintenance and inspection of your building's air flow systems can help with flu prevention. Ronsivalli suggests manufacturers look for leaking air filter sections, missing filters and dirty coils as symptoms of possible contamination.

"Monitor facilities to ensure that no warm, stagnant water is present as it can provide an environment conducive to the growth of problematic microbes such as Legionella, the cause of Legionnaire's Disease," he adds.

To mitigate the spread of influenza, Ronsivalli suggests the following maintenance

for commercial building systems:

- A common service and maintenance procedure is to verify correct outside air intake dampers settings and operation. It is recommended that most commercial spaces operate at a slightly positive pressure relative to the outdoors to reduce the likelihood of contaminants infiltrating into the occupied areas.
- Manufacturers should pressure clean all air handling coils using some germicide and make sure that UV systems are completely clear of any dirt coating. In addition, seal up filter racks in air handlers. Do not allow standing water in drain pans, maintain higher levels of interior humidity, maintain space pressures to contain problem areas and deter contamination.
- Check and validate restroom and other critical area exhaust fans to assure that they are removing contaminants from the building before they become mixed with the indoor air.
- Perform preventive maintenance on small exhaust fans to ensure they have not accumulated dirt, reducing their effectiveness.

Businesses that further want to reduce the risk of flu in the workplace may want to consider upgrading their building’s heating and cooling systems to include HEPA filters or germicidal “C” UV lights.

“The best technologies that help to mitigate the spread of influenza are HEPA filters, germicidal (“C”) UV lights, ozone air purification systems and/or bi-polar ionization -- which cleans the air and helps to improve overall air quality -- as well as certain magnetized filters. In addition, a process called photocatalytic oxidation using ultraviolet light helps to break down pollutants and purifies indoor air,” says Ronsivalli.

But Ronsivalli also points out that simple measures are the first line of defense. Technicians should wear cut-resistant gloves when performing filter changes or basic maintenance to air dampers and commonly exposed system components. He also advises maintenance workers to wear proper fit respirators to ensure that the risk of exposure while working above the ceiling or in poorly ventilated areas is minimized.

Another simple upgrade facilities can implement is to replace air filter types with a higher efficiency filter.

“As filter efficiency increases, typically their resistance to air flow also increases. Always check to be sure the fan system can handle the resistance being imposed by the filters and other components in the system,” advises Ronsivalli.

To further reduce the spread of disease, Ronsivalli suggests placing hand cleaner and hand sanitizer supplies at air handler locations, equipment controls, railings and access doors.

Planning ahead to prepare for the seasonal flu doesn’t stop with routine

maintenance. Communicate influenza safety tips and precautions to all building departments -- especially those whose primary function includes occupancy of guests, visitors and the general public. Provide staff with basic training and increase overall awareness about the risks of influenza exposure and the likely ways to contract the virus. The CDC offers additional guidance to businesses to help them plan and respond the influenza season at www.flu.gov [1].

Lastly, Ronsivalli says to conduct formal training of staff technicians and subcontract workers in how to work with your building systems to reduce risk and increase health and safety as well as reducing exposure to other harmful airborne particles.

Louis J. Ronsivalli Jr. is the service offers development leader for Trane's commercial systems business where he is responsible for creating service offerings and platforms that translate globally. He is also deploying methods for effectively leveraging service growth strategies, while working with his peers across all of Ingersoll Rand.

Links:
[1] http://www.flu.gov/