

## **The Multi-Million Dollar Cost for Health Systems' Failure to Meet Clean Air Standards**

### **The Camfil Report on Hospitals' Challenges in Meeting Air Quality Standards**

[Air quality in hospitals](#)—as a place of healing and recovery—is even more important than the air quality in commercial offices and shopping malls. The purpose of a hospital is to return people to good health, and an essential aspect of this process is ensuring that airborne pollutants do not make existing conditions worse.

However, Camfil has found in its surveys of hospitals that many are not adequately protecting patients from airborne contaminants.

“We know from our research that many hospitals are struggling with their budgets,” says Dave Blackwell, Camfil USA Healthcare Business Segment Manager. “As a result, these facilities are installing low-cost air filters that are not providing the kind of return-on-investment that is ideal. And, worse yet, these filters are not eliminating the kind of pollutants that are a clear and present danger to patients and hospital workers. This issue was serious enough that [ASHRAE Standard 52.2 was recently amended](#) to require manufacturers to test all MERV rated air filters, including hospital air filters. Simply put, hospitals should demand ASHRAE test reports be supplied by their supplier.”

### **Main Challenges to Hospital Air Quality**

One of the biggest reasons that hospitals are forced to spend more on air quality is that these facilities face greater pollutant challenges than other enclosed spaces.

Patients and the hospital workers in contact with them are two of the most significant contributors to the air quality issues unique to hospitals, according to one article from [Consulting-Specifying Engineer](#). Because hospitals are filled with patients who have a variety of ailments, there is a much higher likelihood that some of these patients can release infectious contaminants that can impact indoor air quality.

Consider, for example, a [recent study by researchers at Massachusetts Institute of Technology](#), published in the *Journal of Fluid Mechanics* that found that coughs and sneezes can travel 200 times further than what scientists had previously thought.

Most scientists agreed that the cloud of [infectious pollutants](#) in a cough could travel 200 feet, but the new study found that “droplets 100 micrometers in diameter can travel five times farther than previously estimated, that droplets 10 micrometers in diameter can travel 200 times farther, and that droplets less than 50 micrometers in size can remain airborne long enough to reach ceiling ventilation units.”

The study was important in terms of understanding how airborne pollutants within a hospital can compromise air quality and lead to infectious outbreaks.

“This can all help target and improve mitigations strategies such as spacing between patients in hospitals, air ventilation and filtration in confined spaces,” commented Lydia Bourouiba, the author of the study and an Assistant Professor at MIT’s Department of Civil and Environmental Engineering, in an interview with Healthline.

But for medical officials to implement an effective air filtration strategy, they must have sufficient resources. More often than not, the budget can be a challenge to securing effective air quality improvement measures.

### **Budgetary Impacts on Hospital Air Quality**

There's been a lot of news lately about the number of public hospitals facing extreme state budget cuts and changes in how Medicare reimburses them for treating patients. While this may seem tangential to hospital air quality, it drives at the heart of the funding crises that has forced many healthcare officials to use [low-cost air filters](#) that do not have the capacity to eliminate the most harmful particulates that can affect patient and worker health.

But air quality impacts healthcare systems in other ways. Many hospitals are burdened by spending coming from patients who are admitted with respiratory illnesses directly tied to air pollution.

A [recent study from Rand Corp.](#) has found that Medicare and hospitals could actually reduce their spending on acute care if they focused on reducing the overall level of air pollution.

The study tracked the number of pollution-related hospital events at five California hospitals from 2005 to 2007, and determined that both hospitals and healthcare insurers would have saved significant money on caring for patients with pollution-related ailments if they had helped the state meet federal clean air standards.

Per the article:

“Meeting federal clean air standards would have prevented an estimated 29,808 hospital admissions and ER visits throughout California ... Nearly three-quarters of the potentially prevented events are attributable to reductions in ambient levels of fine particulate matter, that is, particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers [PM2.5].”

Translated into raw numbers, the state's failure to meet clean air standards cost healthcare insurers \$193,100,184 during the two-year time-period of the study.

That means that improved air quality would have eliminated nearly \$194 million in healthcare spending, not just for insurers, but also for the hospitals that were burdened with patients in need of acute care for these pollution-related illnesses.

While this is just one study on the problem, it's clear that any push to reduce outdoor pollution will have a positive net effect on indoor air quality at many hospitals, thereby reducing expenses and helping to focus more resources on air filtration.

And speaking of saving money: Energy-efficient, long-life air filters can reduce energy spend for hospitals' HVAC systems and cut installation labor costs by 2 to 3 times. Most hospitals don't realize that high-quality air filters can save more than they cost.

### **Air Filters**

The advertisement features a photograph of two surgeons in a sterile operating room. They are wearing blue surgical gowns, blue bouffant hairnets, and clear safety goggles. One surgeon is holding a surgical instrument. The background shows the overhead surgical lights and the sterile environment of the operating room. The image is framed by a green border at the top and bottom.

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CLEAN AIR SOLUTIONS

For more than 50 years, [Camfil has designed air filters](#) specifically designed for hospital rooms and operating areas.

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