

# HVAC CENTRAL IN HOSPITAL HYGIENE

With hospitals facing strict hygiene regulations, experts in cleaning and maintenance are in demand, says **Darren Ling**

## RECENT ASSESSMENTS BY THE NEW HEALTHCARE REGULATOR, THE CARE QUALITY

Commission, have highlighted how NHS Trusts are potentially putting hospital staff and patients at risk because they are not meeting the required standards for infection control. These trusts now face tough measures of fines and closures if they fail to address this issue.

Regular cleaning of hospital ventilation systems is crucial for controlling airborne contamination and combating the spread of MRSA and other hospital-acquired infections.

These systems must be properly maintained and be in efficient working order to guarantee the well-being of occupants and to meet the legal requirements of the Workplace (Health, Safety and Welfare) Regulations 1992.

Although hidden, ductwork surfaces must be cleaned regularly to prevent the build-up of dust and dirt composed of organic compounds, including a high proportion of skin and hair. If left unattended, this mix becomes a valuable nutrient for harmful micro-organisms such as MRSA and Clostridium Difficile, which can become airborne and infect patients.

In a recent survey at a major hospital in the east of England, System Hygienics undertook pre and post cleaning analyses of samples taken from the ventilation system throughout the building, including open wards and isolation rooms. Of the 14 samples, evidence of MRSA micro-organism contamination was found in nine areas of the ventilation system. Subsequent analysis of samples taken from the same locations within the hospital proved negative for MRSA bacteria.

Harmful deposits can accumulate in a number of areas within an air supply system including the air-handling unit (AHU), volume control dampers and turning vanes. In addition to the threat posed to hospital staff and patients, these deposits can impair the systems' performance, leading to uncomfortable humidity levels and driving up running costs.

Although it is tempting to cut back on maintenance budgets in a recession, hospitals must focus on the long-term benefits of maintaining clean ductwork. Increasing maintenance spend in the short-term will extend the

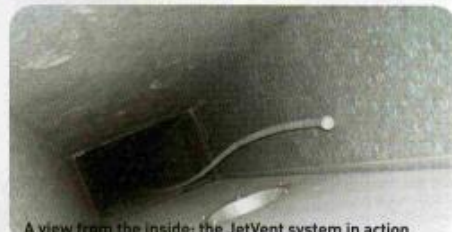
## BEST PRACTICE FOR VENTILATION HYGIENE

*The Guide to Good Practice (TR/19) Internal Cleanliness of Ventilation Systems*, published by the HVCA, offers professional ventilation hygiene providers comprehensive advice on how ventilation systems should be cleaned and maintained. It includes guidelines to ensure that new ductwork systems remain protected during the installation period and prior to commissioning.

When commissioning installation and maintenance work, healthcare professionals must employ highly trained, competent maintenance contractors who are able to give evidence of their skills and prove they can carry out work to TR/19 standards.



The JetVent system



A view from the inside: the JetVent system in action

working-life of equipment, vastly improve indoor air quality, and prevent the build-up of airborne contaminants, which could otherwise call for far greater expenditure when emergency measures are required.

The Department of Health's guidelines on the operational management and performance verification of specialised ventilation systems (*Health Technical Memorandum 03-01: Specialised Ventilation for Healthcare Premises*, published December 2007) offer dedicated advice and guidance on the legal requirements, installation and maintenance of ventilation systems for all types of healthcare premises.

The guidelines advise of the increased health risks to patients should premises fail to properly maintain their ventilation systems and recommend that all systems should be subject to, at least, a simple visual inspection annually. For systems serving critical care, even tighter safety measures are recommended, including quarterly inspections and an annual performance analysis.

It is a healthcare premises' duty to demand an annual visual inspection of all ventilation systems. This will establish that the system is still required; the AHU conforms to necessary safety standards; the fire containment has not been breached; the general condition of the system is adequate for purpose, and the system is operating in a satisfactory manner.

Without regular inspections, healthcare premises are potentially putting occupants at risk of infection.

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