AHU Cleaning

The air we breathe is a common vector for the transmission of harmful pathogens, with the potential to cause infection.

Air Handling Units (or AHUs) have ideal conditions for bacteria, viruses and spores to colonise rapidly; without regular cleaning, condensation and heat combined with microbes inside the AHU filters greatly increases their potential to spread infection through the air-conditioning system. This is particularly concerning in the hospital environment where patients are immunocompromised.

The Risk of Infection

Hospitals are familiar with the risks of HAIs and the costs of MRSA infections. Evidence suggests MRSA, tuberculosis (TB), influenza and measles can all pose a risk as airborne pathogens.

The MRSA bacteria is commonly found in 'dusty' and inaccessible areas such as air conditioning or extraction ducts and it has been evidenced that MRSA can survive on surfaces or skin cells for up to 80 days. Uncleaned AHU's assist in the circulation of pathogens therefore so it is essential to ensure they are routinely and effectively cleaned.

The Most Susceptible

With a significant amount of patients whose immune systems are restricted by medication or infection, it is imperative that hospitals reduce the risk of exposure to air-borne microbes that in turn can cause HAIs (hospital acquired infections). Tests have found pathogens and biological spores on cooling coils from germs of sick patients coughing or sneezing that travelled in the airstream back to the air handler[1].

It is therefore essential that there is a programme for regular and thorough disinfection of the AHUs to greatly decrease the danger of HAIs occurring.

Did you know...

HOSPITAL ACQUIRED INFECTIONS (HAIs) ARE DRAMATICALLY ON THE RISE. AN ESTIMATED 1 IN 10 PATIENTS OF UK HOSPITALS COME DOWN WITH ONE OF THESE HIGHLY COMMUNICABLE BUGS[4]

- Microbials also adhere to cooling coil surfaces where high velocity air passes. Microbials such as fungi and bacteria interlace and form biofilms[1]
- Many microorganisms that grow on air conditioning coils and in the drain pans have been implicated in HAIs. These include Aspergillus, Pseudomonas, Enterobacter and Acinetobacter[2]

Sources: See overleaf.

How Inivos Can Help

Our AHU cleaning can be delivered as an on-call service for emergency situations, a specific project, a complete service, which includes full decontamination of the complete HVAC system, or as a scheduled managed service contract. Our work is carried out in compliance with all relevant health and safety regulations[3].

This enables us to reduce the risk of a patient acquiring an infection whilst in hospital.

Our Service

We manage the project from end-to-end to ensure all stakeholders are aligned through clear communication of a complete project plan. Our teams of qualified technicians are able to operate 24 hours a day, 365 days a year to ensure rapid turnaround and minimum disturbance or disruption to the clinical schedule. This involves:

Pre-Cleaning Assessment

Our first step is to survey the Air Handling Unit and to take samples to actively assess the current the condition and implement the correct cleaning plan. This allows us to analyse the microbial growth and degree of dust contamination. We then turn off and isolate the AHU in accordance with Health and Safety guidelines.

Effective Disinfection

To ensure an effective disinfection, we power wash the coils, blowers and drain pans in the unit then vacuum the interior of the AHU, the connecting ductwork, volume control mechanisms and supply and return air grilles using a HEPA filtered vacuum. Once this is completed, the entire system will be sanitized with a registered biocide to ensure the clean is complete.

Validated Assurance

After cleaning and disinfecting, we validate the efficacy with testing of the dust contamination and microbial growth, before providing you with a report. We also take photographs before, during and after our work to show you the results, in line with our evidence-based approach.

Our Approach

As experts in understanding the importance of infection prevention and control, we pay particular attention to our methods of work to ensure the process is effective by controlling the risk of cross contamination between areas.

Our knowledge and experience takes care of isolating AHUs so as to prevent contamination of other parts of the HVAC system.

Why Inivos?

Not only are we an established and trusted name in healthcare, with facilities and hospitals around the world relying on our advanced hydrogen peroxide vapour and UV-C light disinfection robots, but we also offer a level of expertise second to none, and services not provided by other companies, including call-outs, pre-cleaning assessments and decontamination.

- **Multiple areas included**
- **Evidence based processes**
- **Validated assurance**
- **Dedicated project management**

Helping you provide patient-ready spaces with on-call decontamination and managed services

24 HOUR RAPID RESPONSE 0800 652 2689

Our Inivos services are easy to arrange and tailored to your requirements:

Call **0845 270 6690** or email **customerservices@inivos.com**

Sources: [1] http://facilitymanagement.com/mold-school-hospital-hvac-systems/. [2] http://www.kcleanservices.com/HVACUVGI. [3] Eames I., Tang J., Li Y., Wilson P. Airborne transmission of disease in hospitals. J. R. Soc. Interface. 2009;6:S697–S702. [4] https://ductbusters.co.uk/airborne-infections-in-hospitals/.