

CASE STUDY |



Airial-1000™ Improves Air Quality and Workflow Efficiencies for North Bristol NHS Trust

BACKGROUND

In Autumn 2022, North Bristol NHS Trust embarked on a significant ceiling renovation project, incorporating the installation of Airial-1000™, ceiling fitted air filtration units.

This initiative was particularly crucial to help reduce hospital-acquired infection outbreaks by improving air quality in the Elgar Enablement Unit.

INITIAL APPROACH

The Trust initially utilised Inivos' HEPA-800™ mobile air filtration systems. As the ceiling renovation work was underway, they used this easy-to-use, rapidly deployable mobile unit. Featuring user-friendly touchscreens, these units provided an effective, fast solution for airborne infection control with their High Efficiency Particulate Air (HEPA) filtration and plasma technology.

LONG-TERM SOLUTION: THE AIRIAL-1000™

Transitioning to a more permanent solution, the Trust installed the AIRIAL-1000™ systems. These ceiling fitted units, combining HEPA filtration with UV-C light technology, offer rapid air decontamination with 8 - 12 air changes per hour (ACH) in a typical 6 bed bay with 2 units.

Airial-1000™ provides a non-obtrusive solution to improving air quality without loss of circulation or trip hazards as typically associated with mobile systems. With even 4-way distribution of purified air, it can operate continuously in occupied spaces, with the UV-C light filter eliminating up to 99.9% of airborne pathogens. Their easy installation and remote-control operation catered perfectly to the needs of the Elgar Enablement Unit.

To limit disruption to patients and staff, the AIRIAL-1000™ systems were installed during the ceiling renovation works. Collaboration between the Trust's Infection Control Team, contractors, and Inivos ensured that the project was completed promptly, with minimal impact on the ward's patients or staff.

Juliette Hughes, Deputy Chief Nurse at North Bristol Hospital commented:

"Our infection control team have been working really hard to look at the best products and to think about what might work for us as an organisation. We've been really impressed by the way that we've been able to install and use both the fixed and the mobile units.

"The fixed units are really important in this particular ward because of the population that we're looking after. We're always looking to reduce the number of obstacles that are in the way of



AIRIAL-1000™ display



AIRIAL-1000™ in use

people's safe mobility. Having a fixed unit is clearly much better for this environment."

RESULTS AFTER ONE YEAR

In the year following the installation of the AIRIAL-1000™ units, North Bristol Hospital observed significant improvements in air quality in the Elgar Enablement Unit. The Airial-1000™s have positively impacted patient comfort and experience, with both patients and staff commenting on their quieter operation compared to portable models. "Patients and visitors often ask about the units. When we explain what they are and why they

were installed, visitors love them and tell us to keep them on! Being able to educate the families on the importance of the units and air filtration is very beneficial", Bethany Rogers, Senior Sister.

Staff members have effectively utilised the system's adjustable fan speeds, finding them very easy to interpret and operate. "We run them continuously on auto mode to clean the air. If we see any pop-ups of infection, or have concerns of a particular patient, we proactively increase the fan speed to reduce the risk of infections spreading", Sarah Wheatley, Head of IPC.

The installation of the AIRIAL-1000™ units has led to a marked decrease in infection rates, exemplified by the absence of flu outbreaks on the ward during the winter season so far. This notable reduction, frequently mentioned by healthcare professionals on the ward, demonstrates the system's effectiveness in enhancing both patient safety and staff working conditions.

The reduced infection rates have also had a profound effect on staff wellbeing. Prior to the installation of the AIRIAL-1000™s, the IPC team faced the challenge of daily outbreak meetings, placing considerable time and emotional pressure on staff.

Both Sarah Wheatley and Bethany Rogers commented on this improvement noting the significant reduction in stress and increased efficiency in managing patient care; "the units have significantly reduced outbreaks, saving a considerable amount of time for our staff by minimizing the need for outbreak meetings. Nursing, operational and management staff have all felt the benefit of the Airial-1000™s."

The collaboration between the Trust's Infection Prevention & Control Team, Facilities Department, and Inivos® has been pivotal in this achievement. The AIRIAL-1000™ has not only met but exceeded expectations in addressing the unique challenges of infection control in a healthcare setting.



AIRIAL-1000™ in Elgar Enablement Unit

Did you know... Inivos have a 24/7 On-Call Decontamination Service that can respond anywhere in the UK within 8 hours



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