



AAirDS

Addenbrooke's Air Disinfection Study

First comprehensive pragmatic before-and-after study

In partnership with  AirPurity

First comprehensive pragmatic before-and-after study

Addenbrooke's Air Disinfection Study is the first of its kind. A before-and-after study design on medicine for older people wards to examine how effective air disinfection can be by looking at all aspects, yielding valuable information that will help shape future infection control policy.

1. Clinical Outcomes AAirDS-C (clinical)

a) Primary

- i) Incidence of SARS-COV2, adenovirus, HMPNV, Flu A/B, parainfluenza, RSV, picornavirus, norovirus, s.aureus, c.diff, and any Abx Rx c. CAP or HAP as indication.
- ii) Incidence of SARS-COV2 alone

b) Secondary

- i) Respiratory viruses excluding SAR-COV2
- ii) C.diff
- iii) S.aureus
- iv) Norovirus
- v) HAP - by Abx indication
- vi) All other HAIs
- vii) Severity of C.diff, SARS-COV2 and S.aureus
- viii) Length of stay
- ix) Bed days lost
- x) Abx usage and cost
- xi) 30 day mortality

2. Feasibility AAirDS-E (environment)

a) Air sampling weekly

- i) Fluidigm

b) Air sensors

- i) PM counts
 - 1
 - 2.5
 - 4
 - 10
- ii) CO2 levels
- iii) Relative humidity (RH)
- iv) Temperature

c) Cleaning

- i) Soap usage
- ii) PPE usage
- iii) Alcohol hand sanitisers usage

d) Validation

- i) Standard AGAR/MALDI

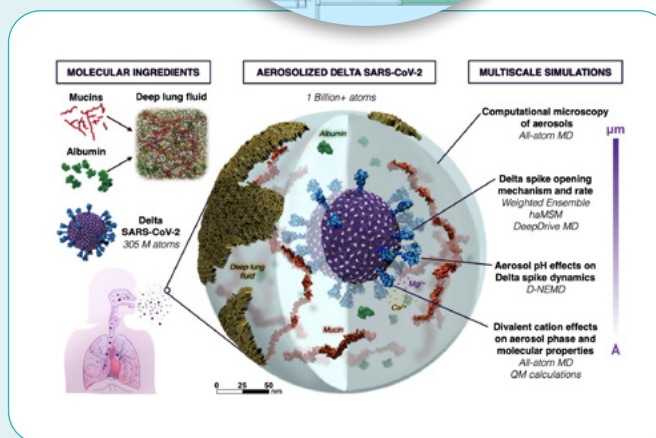
3. Acceptability AAirDS-Q (quantitative)

a) Patients survey

- i) Survey
- ii) Flu/Covid vaccine rates
- iii) Sickness

b) Staff

- i) Survey
- ii) Flu/Covid vaccine rates
- iii) Sickness



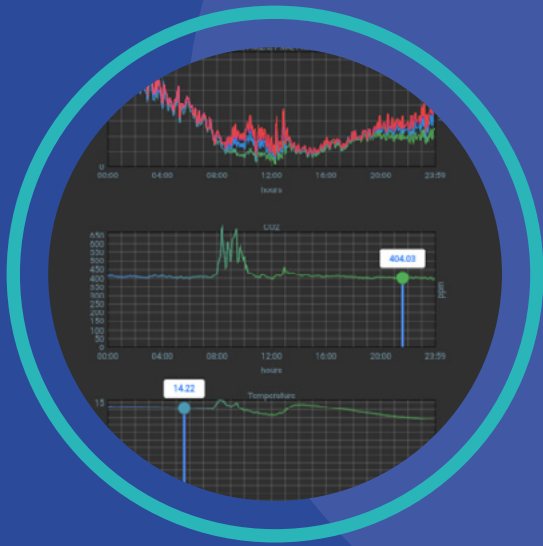
01. Air Sensor & Sampling

Historic infection data will be examined and numerous before-and-after air samples and live air quality data collected using AeroSentinel air sensor boxes placed throughout the wards for 24/7 monitoring. This shows researchers how the air moves and the migration of particulate matter and other factors that may cause infections.

02. Intervention

The AeroTitan air filtration units located in the multi-occupancy bays and corridor filter the air continuously and capture the particles using the High-Efficiency Particulate Air or HEPA filters. In addition, Ultraviolet-C lights integrated into the units clean the air further by inactivating any passing infectious particles. Between 10-15 air change rate per hour will be achieved.





24/7 monitoring

Because health and well-being of patients and staff is paramount!



Our Mission

To learn how effective air filtration can reduce hospital-acquired infections and prevent the secondary infection via aerosols disembodiment transmission, to raise awareness and educate through commissioning of air filtration deployment in hospitals.

To learn more about the study and AirPurity, please head over to these websites:

www.AAirDS.com

www.airpurityuk.com