



# Aerosol spread of disease and its prevention

*An Academy for Healthcare Science webinar*



**Introduction by  
Professor Brendan Cooper**

*Open to all  
Healthcare Scientists*

**Chaired by Dr Anna Barnes,  
President Elect of IPEM  
and  
Professor Stephen O'Connor**



## **Topics:**

- Smart engineering solutions can mitigate airborne transmission risks: where is the evidence?
- The removal of airborne SARS-CoV-2 and other bioaerosols by air filtration in healthcare settings: Real life experience on Covid-19 surge wards
- Lung Scans, Radioactive Aerosols and SARS-CoV-2: lessons for safe practice
- Question and Answer session

## **Speakers:**

**Professor Tony Fisher**, NHS Consultant Clinical Scientist University of Liverpool and NHS Innovation Agency

**Professor Paul White**, Consultant Clinical Scientist, and Head of Clinical Engineering, Cambridge University Hospitals NHS Foundation Trust, Visiting Professor of Clinical Engineering, Medical Technology Research Centre, Anglia Ruskin University, East of England Clinical Engineering Lead NHS England Clinical Entrepreneur

**Dr Chris Mayes**, Senior Radiographer, Nuclear Medicine, Royal Liverpool and Broadgreen University Hospital NHS Trust





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## **Smart engineering solutions can mitigate airborne transmission risks: where is the evidence? - Professor Anthony Fisher MBE MD PhD**

Tony is a Consultant Clinical Scientist in the NHS and a Professor of Physics at the University of Liverpool. He originally graduated in Medicine but continued his career in the Healthcare Sciences specialising in Medical Physics and Clinical Engineering. During the COVID-19 Pandemic he was seconded to the Office of the Chief Scientific Officer NHSE (CSO) to support the Nightingale Hospitals and Mobile Processing Laboratories programmes. Tony is a Non-Executive Director of the AHCS. He received an MBE in 2017 for his services to Healthcare Science and awarded the CSO's Lifetime Achievement Award in 2022.

## **The removal of airborne SARS-CoV-2 and other bioaerosols by air filtration in healthcare settings: Real life experience on Covid-19 surge wards - Professor Paul White PhD DIC CSci FIPEM**

Paul White is a Consultant Clinical Scientist and Head of Clinical Engineering at Cambridge University Hospitals NHS Foundation Trust. In 1994 he was awarded an MSc in Biomedical Engineering from the University of Surrey and a PhD and DIC through Imperial College London in 1998. Paul is responsible for leading and coordinating equipment management strategy and for Clinical Engineering's research, innovation and design activity. The later developing novel medtech prototypes, to meet unmet clinical needs. Paul also works at Royal Papworth Hospital, primarily involved in cardiovascular research and associated clinical service development. He holds a Visiting Professorship in Clinical Engineering in the Medical Technology Research Centre at Anglia Ruskin University.

## **Lung Scans, Radioactive Aerosols and SARS-CoV-2: lessons for safe practice - Dr Chris Mayes BSc PhD**

Chris was 'chair' of the British Nuclear Medicine Society Radiographers, Technologists and Nurses Group 2020-22 and represents the BNMS on the AHCS Professional Bodies Council.

Chris's research interests are in Nuclear Medicine and Radionuclide Therapies. He was co-author on the 2013 EANM Technologist Guide.

Chris has an interest in radioactive aerosols and he updated the ELfH Lung Scanning section in 2018. He investigated using high grade HEPA filters for the sequestration of superfine radioactive aerosols used in Lung Ventilation scans presenting results at the 2018 BNMS Conference.

During the 2020 CoViD-19 pandemic he realized that these filters could be used effectively to filter aerosols containing viruses and published his results in the Journal Nuclear Medicine Communications.

