Royal United Hospitals Bath
NHS Foundation Trust

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Media Release

RUH awarded £830,000 for artificial intelligence research trial

More than £830,000 has been awarded to clinicians at the Royal United Hospitals Bath NHS Foundation Trust so they can work in collaboration with the University of Bath and industry partners to determine if artificial intelligence (AI) software can help identify and guide treatment for blood clots in patients' lungs.

It is hoped that the trial will mean that patients at risk of pulmonary embolic disease – blood clots in the lungs – can be diagnosed as fast as possible, helping to enable treatment sooner and improve patient outcomes.

The grant is being awarded by the Accelerated Access Collaboration, in partnership with the National Institute for Health Research, after the multidisciplinary research team from the RUH made a successful bid to the NHS's Artificial Intelligence in Health and Care Award, which makes funding available for the most promising AI projects that support the NHS Long Term Plan.

Pulmonary embolic disease is a common condition that happens when blood clots cause blockages in the lung arteries. This can be a life-threatening emergency, causing death if not detected early and treated quickly with blood-thinning medication.

Pulmonary embolic disease can also cause long-term problems when clots do not fully dissolve, leaving scar tissue that prevents blood from flowing freely through the lungs. This can leave patients breathless, eventually causing heart failure from the build-up of pressure which in turn can be fatal. This long-term condition is called Chronic Thrombo-Embolic Pulmonary Hypertension (CTEPH). The sooner CTEPH is spotted and treated, the earlier potentially lifesaving treatments can be started.

Radiologists at the RUH will partner with leading healthcare AI companies AIDOC and IMBIO to analyse CT scans of patients who have suspected pulmonary emboli to see whether the diagnosis of blood clots can be made quicker and more accurately.

In addition, the RUH will be continuing its successful partnership working with the University of Bath to refine its own in-house AI tool to help detect CTEPH early.

Dr Jonathan Rodrigues, RUH Consultant Cardiothoracic Radiologist, who is leading the study, said: “We are delighted to receive this prestigious funding to research ways to improve outcomes for the people we care for with pulmonary embolic disease, which is a common condition that can be life-threatening. We hope that by working with our AI partners, using the very latest artificial intelligence tools, we can help to save lives and get the very best value for money for the NHS.”

Professor Jay Suntharalingam, Director of the Bath Pulmonary Hypertension Service and co-investigator, said: “The RUH provides specialist pulmonary hypertension care to approximately 4million people in our region. I’m excited that we will be continuing our work with the University of Bath to develop our own AI tool. It will help with the detection of an important chronic complication of pulmonary embolism that is potentially curable if picked up early.”

Dr Andrew Cookson, Senior Lecturer in Mechanical Engineering at the University of Bath, said: “I am delighted that we will be able to continue the development of our AI-based technology for early detection of CTPEH. This work is the result of a close collaboration between my team at the University of Bath and clinicians at the RUH since 2020, which has had clinical and patient need embedded from the start. With this funding we will be able to develop the software to be much closer to commercialisation and to delivering improved patient outcomes.”

Dr Jonathan Rodrigues concluded: “I’d like to thank everyone who has been involved with the successful award bid and who will be supporting the trial going forward – this really is a game-changer in how we identify and treat pulmonary embolism.”

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Notes to Editor:

At the RUH we're proud to put people at the heart of what we do, striving to create an environment where everyone matters. Everyone means the people we care for, the people we work with and the people in our community.

We provide a wide range of services including medicine and surgery, services for women and children, accident and emergency services, and diagnostic and clinical support services.

We are also provide specialist services for rheumatology, chronic pain and chronic fatigue syndrome/ME via the Royal National Hospital for Rheumatic Diseases which we acquired in 2015.

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In 2021, we acquired Sulis Hospital Bath, an independent hospital that provides care for both private and NHS patients. This has enabled us to provide more care for NHS patients, as well as continuing to provide private care to those who choose it. Any additional income earned through private care is reinvested in services for the benefit of the people we care for at both Sulis and the RUH.

We're currently building a new Cancer Centre at the RUH. The Dyson Cancer Centre, which is set to open in autumn 2023, will help transform the care we provide for patients, families and carers.

We work closely with other health and care organisations as members of the Bath and North East Somerset, Swindon and Wiltshire Integrated Care Board. We strive to improve the health and wellbeing of the people in our community by working together build one of the healthiest places to live and work.

We are rated 'Good' by the Care Quality Commission (CQC).

For more information about the Royal United Hospitals Bath NHS Foundation Trust visit: www.ruh.nhs.uk