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Media Release

New medical device used for first time during patient surgery

A ground-breaking new medical device which improves the accuracy of drilling screw holes into bones during surgery has been used on a patient for the first time during surgery at the Royal United Hospitals Bath NHS Foundation Trust.

The drill guidance system (DGS), which has been developed in collaboration with the University of Bath, helps surgeons to be even more accurate when drilling the holes and reduce the time patients spend in the operating theatre.

When fixing a break in the bone, the surgeon will normally use just their eyesight and x-rays when directing the drill to make the hole in the bone for a screw.

Using the drill guidance system, the surgeon uses all the same techniques but with the addition of a camera on the drill and an indicator which helps them guide the drill in the correct direction as it passes through the bone.

The increased accuracy the DGS provides helps to reduce the number of x-rays a patient needs as well as enabling a single-attempt approach to drilling, reducing bone and soft-tissue damage, and chances of infection.

Since it was introduced, the DGS has been used in operations on wrists, arms, knees and ankles as a result of both trauma and planned surgery. It is hoped that the device will be used in even more operations in the future.

The project at the RUH is being led by Professor Grey Giddins, a Consultant Orthopaedic and Hand surgeon, with support from Dr Ioannis Georgilas, of the University of Bath's Department of

Mechanical Engineering, and support from the National Institute for Health and Care Research (NIHR).

Prof Giddins said: “The use of the drill guidance system for the first time during surgery is fantastic news and really will improve the experiences of the people we care for, reducing the amount of time they spend in surgery as well as reducing the chances of infection.

“I would like to acknowledge the hard work of the research team at the RUH and everyone involved in the project at the University of Bath for their vital support.”

Dr Ioannis Georgilas said: “The development and successful clinical implementation of the Drill Guidance System represents a significant advancement in medical device development.

“This achievement underscores the efforts and expertise of the research teams at both the RUH and the University of Bath. We are proud of the collaboration that has brought this innovative solution to fruition, enhancing surgical precision and patient care.”

The use of the DGS in the first patient operation follows extensive research at the RUH and certification from the Medicines and Healthcare products Regulatory Agency (MHRA), which is responsible for regulating the UK medical devices market.

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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 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.

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.

Our new Dyson Cancer Centre brings together many of the RUH's cancer services under one roof to provide a cancer services hub for over 500,000 people in the South West. The centre includes the RUH's oncology, chemotherapy and radiotherapy services, a 22-bed inpatient ward, a dedicated pharmacy, research team and nuclear medicine and physics teams.

A key feature of the new centre is the Macmillan Wellbeing Hub. The three-storey hub provides a welcoming, non-clinical space designed around the needs of patients and their families. It also includes comfortable accommodation where relatives and loved ones can stay overnight.



Royal United Hospitals Bath

NHS Foundation Trust

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