

# HEALTHCARE SCIENCE WEEK

## DAY 2: MAKING A DIFFERENCE

### Welcome to Day 2 of Healthcare Science Week!

On Day 2, we focus on how Healthcare Scientists are making a difference. Healthcare scientists make a real difference every day — driving innovation, improving diagnostics, and ensuring the highest standards of patient care. Their work is vital to shaping the future of healthcare.

In this newsletter, we welcome colleagues to share quotes and articles highlighting the importance of the Healthcare Science Workforce and how Healthcare Scientists are making a difference.

We look forward to following the celebrations on Social Media. Check in to our website each day for new content!

Tomorrow we focus on the importance of Patient Safety!

#### IN TODAY'S CONTENT:

- **Professor Delia Ripley** - Deputy Chief Scientific Officer for NHS England and Head of the NSHCS
- **Sarah Smith** - Associate Director for Healthcare Science, NES
- **Angela Douglas MBE** - President, BIDVA
- **Registrant Spotlight**
  - **Luke Carine** - Ophthalmic Imaging & Diagnostics
  - **Lauren Ketteridge** - Digital Healthcare Science
- **AHCS Healthcare Science Leadership Journal Highlight** - "Making links across the world and changing peoples lives"



**PROFESSOR DELIA RIPLEY**  
**DEPUTY CHIEF SCIENTIFIC OFFICER**  
**FOR NHS ENGLAND AND HEAD OF**  
**NATIONAL SCHOOL OF HEALTHCARE**  
**SCIENCE**



“Healthcare science is pivotal to transforming the future of the NHS and responding to the three strategic shifts that will be the focus of the 10-Year Health Plan; moving care from hospital to community, analogue to digital and from sickness to prevention.

The healthcare science workforce make a real difference to the lives of others every day by providing a range of high-quality innovative diagnostic, rehabilitative and therapeutic services that support early diagnosis and improved health outcomes for our patients and communities. This highly talented professional group are critical to the design and adoption of innovative developments such as medical technologies, artificial intelligence and genomic advancements that will drive improvements in healthcare delivery, and fuel the transformation of our future NHS.

Happy Healthcare Science week – we celebrate and thank everyone working in this diverse profession.”



# SARAH SMITH

## ASSOCIATE DIRECTOR FOR HEALTHCARE SCIENCE, NHS EDUCATION FOR SCOTLAND



“Healthcare Scientists significantly impact patient care, contributing to approximately 80% of all clinical decisions made within the NHS. Through the work they carry out in diagnosing diseases; monitoring treatments and developing new technologies, healthcare scientists are an essential, but often unrecognised, professional group that spans a wide range of specialties and will be pivotal in the transformation of service delivery.

Every day our healthcare scientists make an impact on the patient pathway. Through the use of new technologies such as Artificial Intelligence, Healthcare Scientists are reducing diagnostic waiting times allowing for quicker diagnosis thus delivering better patient outcomes. They are at the forefront of research and innovation developing improvements and innovative ways to treat our patients.

Healthcare science week (10th – 16th March) provides us with a platform to celebrate their contribution to the patient pathway and raise awareness of this vital professional group. NHS Education for Scotland HCS team have a range of activities planned spanning from engagement with school pupils with stakeholders such as Developing Young Workforce; spotlight sessions with colleagues from a range of specialties; awareness sessions within our science centres and lots more.”



# THE LIFE SCIENCE INDUSTRY AND THE AHCS LSI REGISTER

Healthcare science plays a key role in developing life science industry products (medtech, diagnostics, pharmaceuticals). This technology is central to the NHS and expert product support is often provided by registrants on the [AHCS LSI Register](#).

Each day during Health Care Science Week 2025, we will highlight a different aspect of the life science industry and the AHCS LSI Register.

## ANGELA DOUGLAS MBE PRESIDENT, BIVDA

**“Early-stage diagnosis or implementing the appropriate diagnostics, at the right point in the patients’ clinical pathways, plays a crucial role in improving treatment outcomes.”**



“The ability to diagnose a disease at an early stage often means the disease is more treatable, e.g., early-stage cancers are typically easier to treat and have higher survival rates.

It allows timely intervention, which can prevent disease progression and reduce the risk of complications. This is particularly important for chronic conditions like diabetes and cardiovascular diseases.

Early treatment is generally less expensive than managing advanced stages where interventions can be more complex and costly.

For infectious diseases, early diagnosis can help prevent the spread to others through timely isolation and treatment of affected individuals.

Early diagnosis and treatment can improve quality of life for patients by managing their symptoms more effectively and preventing severe complications.

Overall, early diagnosis and the use of appropriate diagnostics is a key component of effective healthcare, enabling better management of diseases and improving overall health outcomes.”

# REGISTRANT SPOTLIGHT

## AN INSIGHT INTO OPHTHALMIC IMAGING & DIAGNOSTICS AT MANCHESTER ROYAL EYE HOSPITAL

**Luke Carine, Advanced Ophthalmic Science Practitioner, Manchester Royal Eye Hospital**

Being able to see is one of the five primary senses and it is often considered by many as the one sense we fear losing the most. Here at Manchester Royal Eye Hospital (MREH), we understand fully that maintaining healthy eyes and vision is of the utmost importance. Within our area of work, Ophthalmic Imaging & Diagnostics, we help those patients who may be experiencing issues with their vision, eyes and their surrounding structures by carrying out expert diagnostic testing and imaging.

The Ophthalmic Imaging & Diagnostics department is primarily made up of Ophthalmic Science Practitioners (OSP) who offer services within all the Ophthalmological sub-specialities across multiple hospital sites within Greater Manchester. As one of the largest Ophthalmic Imaging departments in the UK, we work closely with our Ophthalmologist, Optometric, Orthoptic and nursing colleagues. The service has expanded exponentially over the last few years, particularly post-covid pandemic, which had a profound impact on highlighting the necessity of the service and what we can offer as an addition to the wider ophthalmic multi-disciplinary team.

The Head of Department is Jane Gray who is also currently Clinical Lead for Greater Manchester Vision and Ophthalmic Sciences. Under her leadership, the service over the years has grown from just a handful of staff to 53 full-time staff. Some of these staff now specialise within specific areas of ophthalmic disease or ophthalmic research which, in turn, highlights the growing, evolving nature of our profession.



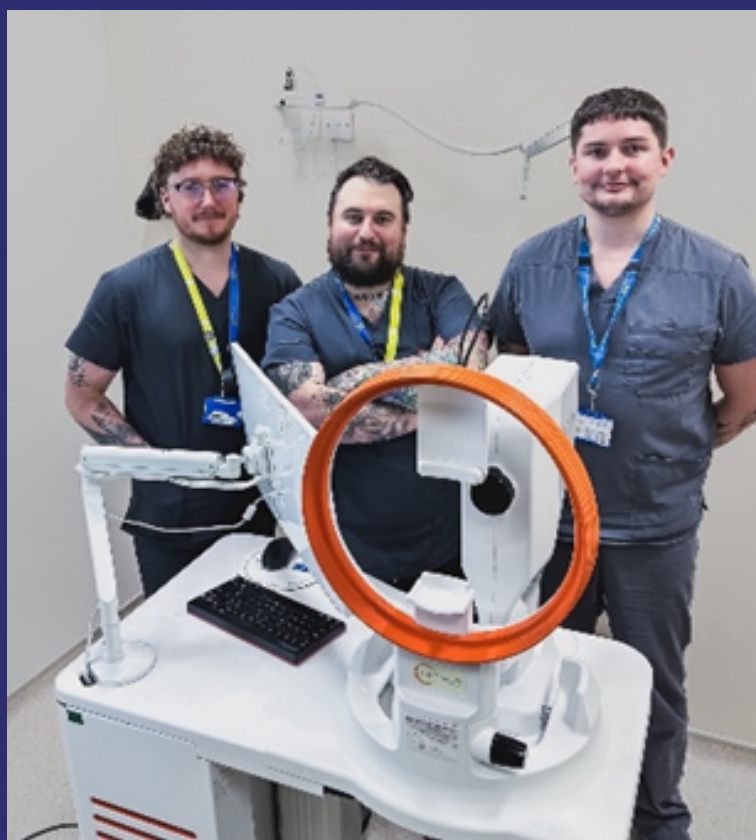
*The Ophthalmic Imaging & Diagnostics Management Team with Professor Tariq Aslam (4th from the left), Consultant Ophthalmologist and Professor of Ophthalmology and Interface technologies.*

Diabetic retinopathy, glaucoma and cataracts; these are perhaps some of the most usual eye conditions that the public are aware of and as we are facing a growing, aging population, these conditions are becoming more common and hospital eye services throughout the UK are under ever increasing pressure. Here at MREH, we have recognised this and are at the forefront of implementing the latest ophthalmic digital imaging technology. This is enabling us to carry out virtual diagnostic and monitoring clinics, which are now a well-established, crucial element to reducing our patient waiting lists.

Diagnosed early, sight loss can often be treated, and vision preserved. The dedicated team here at MREH are integral to achieving early diagnosis for patients within the Greater Manchester area, and further afield.

Ophthalmology and eyecare, for a number of years now has been the busiest outpatient speciality within NHS England. Figures reported in September 2023, highlighted that there were 640,000 people waiting to start specialist ophthalmology treatment and that Ophthalmology was one of the largest contributors to NHS England's waiting lists.

Working alongside the multi-disciplinary teams across all hospitals within MFT, the OSP team provides a service that has enhanced patient accessibility, streamlined workflows and reduced hospital visits while maintaining high-quality patient care.



*Some of the team trialling the latest technology from Optovue*

# AN UNEXPECTED JOURNEY: A CAREER IN DIGITAL HEALTHCARE SCIENCE

Lauren Ketteridge, Digital Healthcare Scientist

From the artificial intelligence systems used to pinpoint the exact locations of blood clots faster than any human could to the now widespread adoption of virtual hospital wards, technology is everywhere you look in health. Indeed, the development of digital has progressed at such a pace in recent years that from within has emerged a profession of its own - that of the Digital Healthcare Scientist. To celebrate Healthcare Science Week 2025, we hear from Lauren Ketteridge, one such registered Digital Healthcare Scientist about her journey and thoughts for the future.



My journey to a career in digital healthcare science has been winding and largely unintentional, though looking back, I can see how each of the pieces fell into place. Quite honestly, I can't imagine things working out any other way!

I was fortunate that career discussions started very early in my secondary education - and that my school required work experience throughout my studies. For someone with such an eclectic mix of interests as myself, however, such interventions did not make career decisions any easier, as I constantly swung between conflicting ideas of architecture, cyber-security, and graphic design! From the age of sixteen, I also took on a part-time job in a community pharmacy, which provided me with invaluable hands-on experience and opened up even more options to consider! Ultimately, I went with what I thought would be the most stable path, pursuing a mathematics-heavy curriculum with a view to studying a computer science degree.

Once fully immersed in computer science at university, I quickly realised that I had chosen the subject for all the wrong reasons, and that presumed career stability could not outweigh a burgeoning disinterest for the minutiae of processor design. Within a term, I had dropped out and returned to my previous role in community pharmacy - now expanded to cover full-time hours and a larger geographical area. This period in my career is one I look back on with great fondness, as it encompasses some of the most impactful patient encounters I have ever had. It was also when the very first seeds of digital healthcare were planted in my mind. I vividly remember the day the pharmacy had its new electronic patient record system installed, a moment of such wonder, and the rollout of the Freestyle Libre Continuous Glucose Monitoring devices soon became an area of fascination.

I continued working in community pharmacy throughout the COVID-19 pandemic, but this soon became my tipping point. Like many healthcare professionals, I was frustrated with the diminished level of patient care and the exponentially widening health inequality. The pandemic forced me to re-evaluate my career path, and I soon realized that returning to university would provide new opportunities for growth and impact.

Having decided to return to university, the next question was one of what to study. I knew I wanted to do something healthcare-related, but I felt that many of the courses related to traditional healthcare delivery roles were too constrained. Reflecting on my interests gained while working in community pharmacy, digital quickly emerged as a recurring theme and in what now almost feels like a dream, I found a relevant course at the same university I had previously dropped out of. It was a no-brainer. I clicked apply.

From there, I spent a whirlwind three years combining studies in behavioural sciences, physiology, digital methodologies, entrepreneurship, and professional ethics. The inclusion of hospital placements in my course allowed me to explore the role of digital across a range of specialities and clinical settings, significantly expediting my development. By the end of the three years, I was a fully formed professional with a brand new registration and the pride to say I am a Digital Healthcare Scientist.

### **Digital Health on the Daily**

While there are numerous roles available in both the NHS and industry for a digital healthcare scientist, I am currently focussing my skills in an academic context by completing a PhD. My research investigates how computer modelling can be used to assess treatments for serious lung injuries, such as primary blast lung injury and chemical lung injury. This work is a crucial step towards building fully fledged digital twins – software representations of patients that can help clinicians decide on treatment courses at the bedside.

My role is largely desk-based, involving a lot of problem-solving and programming. However, being a digital healthcare scientist involves much more than technical knowledge! I constantly use my wider professional skills to engage with the ethical implications of my work and navigate collaborative projects involving clinicians, software developers, and engineers. These collaborations are essential for ensuring that our models are both accurate and clinically relevant.

Overall, it's a challenging but immensely rewarding job, with the potential for massive patient impact. Knowing that my work could one day lead to life-saving treatments keeps me motivated and passionate about what I do every day; until then, the agile nature of the role and the need for life-long learning helps keep things fresh!



## Looking to The Future

Digital Healthcare Science is a rapidly evolving field that is crying out for more people willing to take the plunge. Its widely collaborative nature and focus on inter-professional communication mean it is a discipline that rewards having a broad set of life experiences. Indeed, being a Digital Healthcare Scientist does not require wizard-level proficiency in programming or the ability to recall information transfer protocols from memory; it simply requires a knack for problem-solving and innovation. As such, Digital Health Science offers numerous pathways both into and within the career... and who knows, with the expanding role of technology in health, you might already be working in digital without realizing it!

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Digital Healthcare Scientist is a Practitioner-Level role available for registration on the Academy for Healthcare Science Professional Standards Authority Accredited Register. For those not studying on an approved programme, you may apply to register as a Digital Healthcare Scientist via an AHCS Certificate of Equivalence. Further information as to this process can be found [here](#).

## Additional information

AI detection of blood clots - <https://royalpapworth.nhs.uk/our-hospital/latest-news/ai-technology-introduced-benefit-stroke-patients>

Implementation of virtual wards - <https://www.england.nhs.uk/virtual-wards/>

# AHSC HEALTHCARE SCIENCE LEADERSHIP JOURNAL HIGHLIGHT

## PAISLEY HALL - “MAKING LINKS ACROSS THE WORLD AND CHANGING PEOPLES LIVES”

Paisley Hall is a Highly Specialised Devices Cardiac Physiologist at the Queen Elizabeth Hospital Birmingham, UK. In October 2023 she embarked on a trip to Lagos, Nigeria with the charity Arrhythmia Alliance to work on their Pace4Life programme, training local teams in how to implant and follow-up patients with cardiac devices. Here is how it happened.

### What is Arrhythmia-Alliance’s Pace4Life programme?

The Pace4Life programme’s mission is to recycle and re-use devices from the developed world for use in the developing world. This will have a lasting impact on the health and well being of people who would otherwise go untreated. The programme also ensures that cardiac teams in the developing world receive ongoing training and support so that they can continue to treat patients following a Pace4Life visit, becoming self-sufficient in implanting and monitoring donated recycled devices.

This contrasts with the United Kingdom where approximately 35,000 patients have a pacemaker implanted each year at a cost ranging from £5,000 to £50,000. When someone with an implanted device dies it is either buried with them or is removed and discarded as medical waste. It may also be placed in a box and get forgotten! Likewise, if a device or any associated implant kit becomes out of date or is accidentally de-sterilised it cannot be used and is thrown away as medical waste.

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[Click here to read the full article.](#)

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