THE HEALTHCARE SCIENCE LEADERSHIP JOURNAL

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AHCS
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THE HEALTHCARE SCIENCE LEADERSHIP JOURNAL

Editorial Board

In this issue

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AHCS Academy for Healthcare Science

EDITORIAL

Welcome to the Spring 2026 edition of *The Healthcare Science Leadership Journal.*

Spring in the NHS is meant to signal fresh starts. In practice, the choice facing us this year is stark: 'reform or die'. We are moving beyond the familiar cycle of crisis management to deliver a Neighbourhood Health Service that puts power in patients' hands, liberating our workforce from the 'analogue' burden that steals time to care.

This issue lands at a defining moment. Following the 'Change NHS' consultation and Lord Darzi's diagnosis of a system in critical condition, the 10-Year Health Plan has moved us from conversation to operation. The strategic horizon is now defined by three fundamental shifts: from hospital to community, from analogue to digital, and from sickness to prevention. For healthcare science, these are not abstract policy goals; they are the technical specifications of our daily work.

We see this most vividly in the shift from analogue to digital. As the NHS integrates the Federated Data Platform and moves toward a Single Patient Record, our community must be the bridge between the technical and clinical reality. We ensure that 'digital' means safer, quicker, and more equitable, not just newer.

Yet, innovation cannot survive without a solid foundation. We open with Professor Chris Hopkins in *"From Policy to Practice"*, reflecting on the governance and professional accountability required to turn these high-level policy shifts into safe delivery in our workplaces.

Ryan Cooper's *"From Bench to Boardroom"* then tackles a question vital to the emerging Neighbourhood Health Service model: how do you keep your scientific identity, curiosity, rigour, and humility, while stepping into strategic decision-making? (No cape required.)

Resilience is tested when the system is under strain. Stephen Qadir writes candidly about service pressure and the human reality behind the productivity agenda. Simultaneously, the quality landscape is evolving; the introduction of Modern Service Frameworks and the embedding of Martha's Rule serve as reminders that listening, escalation, and timely review are life-saving design features.

People and inclusion (EDI) remain central threads, particularly as the new NHS Management and Leadership Framework begins to shape professional standards. Danielle Johnson explores inclusive leadership as practical, day-to-day behaviours that shape psychological safety. In a service built on multidisciplinary expertise, inclusion is operational.

Elsewhere, the lens widens to capture the future of our workforce. Saira Hussain and colleagues discuss reimagining leadership within the Scientist Training Programme (STP). Their work is timely: the 2025 STP Core Curriculum Review has just reshaped training to explicitly include data management and environmental sustainability, skills that are no longer optional extras, but core competencies for a Net Zero, digital NHS. Perhaps we ought to ask ourselves this: *how do we 'fully' embed EDI into practice – vertically and horizontally, across the patient pathway, the workforce and into our core curricula?*

We also feature Vicki Heath challenging assumptions in *"You Do Not Look Autistic"*; Jenna Tugwell-Allsup exploring the value of secondments in *"Leading on Loan"*; Martin O'Beirne sharing pragmatic redesign in *"Lean But Not Fragile"*; Joy Tweed reflecting on developing very senior leaders; and Elaine Cloutman-Green pitching *"It Shouldn't Happen to a PhD Student"*.

We started with learning and reflection, and closed with recognition. As the NHS establishes the new College of Executive and Clinical Leadership, we are reminded that development is rarely linear. Growth often happens in the messy middle, between competence frameworks, service demands, and the small moments where we choose to lead well.

If you take one thing from this edition, let it be this: policy sets direction, but healthcare science makes it real. One calibration, one validation, one audit trail, one compassionate escalation, one improvement cycle at a time. And sometimes the most radical leadership act is to ask, calmly: *What problem are we actually trying to solve?*

As always, we welcome your leadership provocations, reflections, and training experiences for future editions.

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ADVANCING GOVERNANCE AND PROFESSIONAL LEADERSHIP IN HEALTHCARE SCIENCE

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The Academy for Healthcare Science (AHCS) is pursuing a comprehensive strategic agenda designed to reinforce governance structures, enhance professional recognition, and advocate for regulatory reform across the United Kingdom. This update synthesises recent developments within the Professional Bodies Council (PBC) and associated policy initiatives aligned with the Council's two-year Strategic Plan (2025–2026). These initiatives reflect a commitment to strengthening healthcare science leadership and ensuring its integral role in shaping future health systems across the UK.

Regulatory Advocacy

Statutory regulation remains a cornerstone of AHCS policy. Wales has taken a leading position by mandating professional registration for healthcare scientists through the Health and Care Professions Council (HCPC) or the Professional Standards Authority (PSA) accredited registers. Several health boards have implemented this requirement, with others in the process of adoption. Concurrently, AHCS continues to engage with Chief Scientific Officers (CSOs) and Advisers across the UK to promote harmonised regulatory standards and advocate for expanded professional scope, including prescribing rights and the utilisation of Patient Group Directions (PGDs). These changes are critical to enabling healthcare scientists to contribute fully to multidisciplinary care pathways.

Professional Recognition

A significant focus of the AHCS strategy is the development of a revised Fellowships and Honorary Fellowships Scheme, incorporating clear eligibility criteria and procedural frameworks to recognise exceptional contributions to healthcare science. This initiative complements existing recognition mechanisms across the UK. These efforts aim to elevate the visibility of healthcare scientists and celebrate their impact on patient care, innovation, and system transformation.

Clinical Leadership and Workforce Development

The introduction of eleven new Healthcare Science Clinical Lead roles represents a significant advancement in strengthening country-specific leadership and facilitating bidirectional communication between AHCS and regional stakeholders. These roles will ensure alignment of national priorities with local implementation. In parallel, the PBC is progressing work on the Higher Specialist Scientist Equivalence (HSSE) and Consultant Clinical Scientist appointment processes, promoting shared learning and the development of harmonised standards across professional bodies.

Policy Engagement and Advocacy

The AHCS, supported by all healthcare science professional bodies, has consistently advocated for extending PGDs to Clinical Scientists and Biomedical Scientists for nearly a decade. Despite a formal NHS England consultation in 2020, legislative changes to the Human Medicines Regulations (2012) and Misuse of Drugs Regulations (2001/2002) remain pending. The AHCS has contributed substantively to national policy discourse, notably through its responses to the consultation on the Medicines and Medical Devices Act (2021). Given the evolving healthcare landscape and the increasing recognition of healthcare scientists' value within multidisciplinary teams, AHCS asserts that the time is right to revisit this conversation.

Recent engagements have included meetings with CSO Professor Dame Sue Hill to discuss the NHS 10-Year Health Plan and participation in evidence discussions related to Lord Carter's review of UK pathology services. Furthermore, healthcare scientists contributed to the Clinical Academic Summit hosted by the Academy of Medical Sciences, which explored innovative models for creating clinical academic posts and strategies for scaling these nationally. The President extends thanks to Dr Steven Rogers for ensuring healthcare scientists were well represented in these discussions.

Governance and Inclusion

The PBC has recently welcomed new representatives, reinforcing its commitment to diversity, inclusivity, and active engagement with professional bodies across the healthcare science community. By fostering collaborative dialogue, the PBC aims to enable healthcare scientists to speak with 'One Voice' on matters of policy, regulation, and professional development. This unified approach strengthens the profession's influence in shaping national health strategies, advancing statutory regulation, and promoting equitable recognition of healthcare scientists' contributions to patient care and innovation.

Such cohesion is essential in an era of rapid technological change and increasing complexity in healthcare delivery. Through shared priorities and coordinated action, the PBC seeks to amplify the collective impact of healthcare science, ensuring that its voice resonates clearly within policy-making arenas and across the wider health system.

Visibility and Communication

Monthly blogs authored by the AHCS President have provided thought leadership on critical topics, including regulatory frameworks, equivalence processes, and clinical academic pathways. These communications have amplified the visibility of healthcare science and reinforced the Academy's role in shaping future policy and practice. Blogs can be accessed via the AHCS website here: https://www.ahcs.ac.uk/professional-bodies-council/presidents-blog/

Conclusion

The AHCS is advancing a multi-dimensional strategic programme encompassing governance reform, regulatory advocacy, innovation, professional recognition, and leadership development within healthcare science. These initiatives are not isolated actions, but form part of an integrated framework designed to strengthen the profession's influence on health policy and service delivery.

Regulatory advocacy remains pivotal, with AHCS championing statutory registration and expanded prescribing rights to optimise workforce capability and patient safety. Professional recognition initiatives, such as the revised Fellowships and Honorary Fellowships Scheme, seek to elevate the visibility of healthcare scientists and acknowledge their contributions to innovation and clinical excellence.

Leadership development is being operationalised through the leadership academy and the creation of National Healthcare Science Clinical Lead roles, fostering a coherent leadership pipeline across the UK. These efforts are underpinned by robust stakeholder engagement and collaborative partnerships with national bodies, professional organisations, and policymakers.

Collectively, this strategic agenda positions healthcare science as a critical enabler of evidence-based practice, system transformation, and improved patient outcomes. By embedding healthcare scientists within policy, clinical leadership, and innovation ecosystems, the Academy is ensuring that the profession remains central to the delivery of high-quality, sustainable healthcare in an era of rapid technological and demographic change.

WRITE FOR THE JOURNAL!

Articles published already in this Journal have encouraged and informed individual readers, fed into regional NHS policy and raised the profile of both contributors and the profession.

Through the Journal, the Academy for Healthcare Science seeks to develop leadership thinking and to encourage every individual to grow towards their full potential, across both healthcare science and clinical research practitioner workforces. We welcome article submissions that discuss leadership in healthcare science as well as those presenting relevant leadership issues from other areas. Examples of articles published so far include:

- Writing up change projects that provided leadership insights and skills;
- Describing leadership lessons learnt from a particular experience;
- Looking at leadership theories and ideas and highlighting how they can be applied in a particular context;
- Discussing ethical and moral issues faced by leaders, such as how to motivate others, deal with interpersonal conflict, encourage diversity and retain personal integrity;
- Documenting personal experiences of leadership and change;
- Exploring leadership strategy and policy; and
- Building networks and coalitions to achieve change.

If you are interested in writing for the Journal or want to submit an article please send your ideas to leadershipjournal@ahcs.ac.uk. If you would like to contact the current editors for further discussion and support please use the same email address. Guidance for contributors and previous editions are available at https://www.ahcs.ac.uk/about-us/hcs-leadership-journal/

FROM POLICY TO PRACTICE:
BUILDING RESILIENT REGULATION FRAMEWORKS FOR HEALTHCARE SCIENCE

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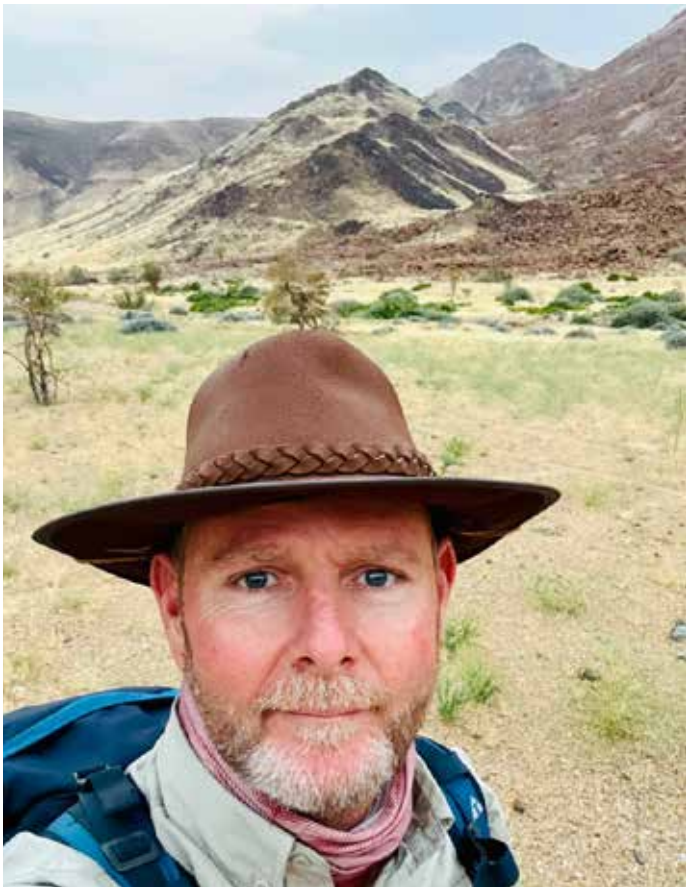
Abstract

Healthcare science professionals are the backbone of safe, effective, and innovative care across the NHS. As their roles expand into new clinical and technological frontiers, the need for robust governance and regulatory frameworks has never been greater. This article sets out the leadership challenge: how to embed professional accountability at every level of practice. It provides a clear roadmap for organisations to develop policy positions that safeguard patients, uphold professional standards, and align with Statutory and PSA-accredited regulation, locally and nationally.



Chris Hopkins, *President of the Academy for Healthcare Science & Deputy Director of STEC (Science, Technology and Engineering Committee), Institute of Physics and Engineering in Medicine.*

Introduction

The transformation of healthcare delivery, driven by technological innovation, integrated care models, and workforce diversification has amplified the need for clear professional accountability frameworks. Healthcare science professionals operate across more than 50 disciplines, many requiring statutory registration with the Health and Care Professions Council (HCPC) or non-statutory registration with Professional Standards Authority (PSA) accredited bodies such as the Academy for Healthcare Science (AHCS) and the Register for Clinical Technologists (RCT).

Failure to establish robust accountability arrangements risks patient safety, undermines public confidence, and exposes organisations to regulatory non-compliance. Leadership must therefore prioritise the development of comprehensive policies that define professional oversight, governance, and escalation pathways.

Why professional accountability matters

- **Public protection:** Ensures only competent, registered professionals deliver care.
- **Regulatory compliance:** Aligns organisational practice with HCPC and PSA standards.
- **Workforce integrity:** Supports fair recruitment, supervision, and appraisal processes.
- **Organisational assurance:** Provides clear escalation routes for managing professional concerns.

> **“Professional regulation protects patients, empowers professionals, and builds trust”**

Core principles for policy development

Drawing on best practice from NHS governance frameworks, organisations should embed the following principles:

1 Workforce planning and role design
   - Map service needs and identify roles requiring statutory or PSA accredited registration.
   - Engage professional leads early to ensure alignment with regulatory standards.

2 Job descriptions and person specifications
   - Develop job descriptions through professional leads to maintain consistency.

- Explicitly state operational and professional accountability arrangements.

3 Recruitment and selection
- Mandate professional lead involvement in shortlisting and interviews for registrant roles.
- Record registration requirements in Electronic Staff Record (ESR) and verify compliance at appointment.

4 Use of protected titles
- Enforce correct use of HCPC protected titles and clarify when professional titles may be referenced.

5 Registration oversight
- Implement systems to monitor HCPC and PSA accredited registration cycles.
- Require operational managers to validate registration status regularly.

6 Professional supervision
- Establish structured supervision arrangements tailored to each discipline.
- Allocate resources for external supervision where specialist expertise is required.

7 Managing concerns
- Define clear triage and escalation processes for professional concerns.
- Outline mandatory referral criteria to HCPC, AHCS, or RCT for serious issues.

8 Staff appraisal and development
- Integrate professional standards into Appraisal and Development Reviews processes.
- Ensure professional representation during appraisal for cross-disciplinary roles.

> **“Strong governance is the foundation of trust, safety, and integrity”**

> **“The standards we set today will define the quality of care for generations to come”**

Steps to create a policy position

Organisations should adopt a systematic approach:

Step 1: Governance alignment
- Assign executive accountability for healthcare science professions (e.g. Director of Health Science).
- Establish a Health Science Professional Governance Group to oversee policy implementation.

Step 2: Stakeholder Engagement
- Consult professional leads, operational managers, workforce teams, and safeguarding officers.
- Engage external regulators (HCPC, AHCS, RCT) for compliance guidance.

Step 3: Policy Drafting
- Incorporate principles of accountability, registration oversight, and escalation pathways.
- Define scope to include substantive, bank, agency, and commissioned service staff.

Step 4: Implementation Framework
- Develop ESR linked monitoring systems for registration compliance.
- Create referral protocols aligned with professional regulatory requirements.

Step 5: Training and communication
- Provide induction and ongoing training for managers on professional accountability.
- Disseminate the policy through governance forums and digital platforms.

Step 6: Audit and review
- Maintain a confidential register of referrals and monitor compliance monthly.
- Review the policy every three years or sooner if regulatory changes occur.

Leadership imperatives

Healthcare science leaders must champion professional accountability as a cornerstone of patient safety and workforce integrity. This requires:
- Strategic Vision: Embedding accountability within organisational culture.
- Collaborative Governance: Bridging operational and professional structures.
- Continuous Improvement: Leveraging audit findings to refine policy and practice.

Conclusion

Professional regulation and accountability are not discretionary; they are fundamental to delivering care that is safe, effective, and ethically sound. Embedding a structured policy framework, grounded in clear principles, enables organisations to protect patients, empower professionals, and sustain public confidence in healthcare science across the UK. Without accountability, the pillars of safety, trust, and quality collapse.

FROM BENCH TO BOARDROOM:
LEADING CHANGE THROUGH CURIOSITY AND CONTINUOUS IMPROVEMENT IN HEALTHCARE SCIENCE

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My career in Healthcare Science commenced as a trainee Biomedical Scientist (BMS) in Histopathology. Due to a lack of clear career guidance during my undergraduate studies, I was initially uncertain about my future career directions.

I subsequently relocated to pursue promotional opportunities within Biomedical Science, working across three Scottish health boards. Remaining within my initial health board might have limited my promotion prospects. Relocating enabled me to experience different teams and workflows, assume greater responsibilities, and broaden my knowledge and skills, while gaining insight into the specific challenges faced by each health board.


Ryan Cooper

Early in my role as a senior BMS, I received training in lean methodologies and internal audits, which have consistently influenced my focus on quality improvement throughout my career. Additionally, I completed a short course with the Institute for Leadership and Management (ILM), applying this knowledge by leading a team in redesigning the routine Histopathology laboratory. The original layout impeded the efficiency of routine staining of glass slides. The redesign involved establishing a central workstation for collecting glass slides from all staff, facilitating rapid loading onto the automated staining machine and thereby improving turnaround times for patient samples.

In my capacity as a senior BMS, I was responsible for quality management and became extensively involved in the peer-review process for Clinical Pathology Accreditation (CPA). This experience ignited my interest in accreditation and continuous quality improvement. I served as an Assessment Manager with UKAS for three years, leading assessment teams across the four UK nations. This role exposed me to diverse healthcare practices, enhanced my communication skills with stakeholders, and strengthened my ability to manage challenging conversations, all while advocating for peer review and ongoing quality enhancements.

Transition to Strategic National Role

During my time with UKAS, the Point of Care Testing (POCT) standard, ISO 22870:2016, was integrated with ISO 15189:2012 into a revised version in 2022. UKAS actively promoted POCT among Assessment Managers during on-site Assessments. Throughout the CPA transition to UKAS and the implementation of ISO 15189:2012, there were very few laboratories accredited for POCT. Driven by a natural curiosity as a professional, I sought to investigate the obstacles to achieving POCT accreditation. Consequently, I explored the prevalence of these issues, the diversity of POCT staff structures, and the communication and ownership challenges associated with POCT.

I completed a ten-month Scottish Improvement Leader (ScIL) course during the COVID-19 pandemic. The course incorporated a live project, facilitating the application of quality improvement tools. I led a data-driven initiative that contributed to the identification of SARS-CoV-2 variants in Scotland. Managing the project and overseeing stakeholder feedback presented challenges, as they involved a more centralised data comparison process than what NHS boards were accustomed to. Navigating the project through the intricate stages of the Public Health monitoring process served as an exemplary experience throughout the ScIL course, culminating in the publication of a poster[1] at the conclusion of the programme. The ScIL programme is designed to provide delegates with a stepwise approach to data collection, and measuring the quality improvement, which enables the collation of the elements/style used in a poster presentation, remaining informative but brief.

Following the cessation of many COVID-19 pandemic procedures, I continued to lead a stakeholder group providing expertise on the utilisation of POCT during the pandemic response. As this national POCT group developed further, securing sponsorship from the Scottish Government, additional stakeholders were incorporated into the group to accommodate the increasing deployment of POCT within the community and the decentralised diagnostic testing observed throughout the pandemic response.

Value of Extra-Curricular Experience

The absence of career guidance throughout my secondary and subsequent education instilled in me a curiosity about alternative approaches. Consequently, I assumed the role of a STEM (Science, Technology, Engineering and Mathematics) ambassador[2] while employed in northern Scotland. This

position was highly rewarding, as it provided pragmatic industry-specific career advice, particularly for students engaged in a rigid curriculum that fails to encompass the breadth of opportunities available within STEM disciplines. Several students expressed an interest in pursuing careers as Cytogeneticists following genomics lessons in secondary school. However, this specific profession has small staffing resources across the country, limiting future employment opportunities. The curriculum did not reflect the diverse array of STEM careers available to those pupils with compatible qualifications in scientific subjects. It was the role of STEM ambassadors like me to increase the awareness from my own career path, of the different types of careers available to pupils with an interest in STEM subjects.

> **"The absence of career guidance throughout my secondary and subsequent education instilled in me a curiosity about alternative approaches"**

During one of my quality manager roles, I led the consolidation of three laboratory accreditation schedules into a unified scope for diagnostic laboratory accreditation. I also completed a brief Gautrey leadership course, which provided insights into the common human traits encountered by healthcare leaders[3]. This training motivated me to enhance communication and transparency within the diagnostic service. I revised the procedures for identifying and documenting adverse events, leading to more expedient recording and greater visibility of such events across all areas of service. Despite the similarities among scientific disciplines, they often operate in isolation, thereby obscuring risks and hindering the exchange of best practices and lessons learned. As a result of the implemented changes, there was a fourfold increase in the detection and visibility of adverse events.

My initial training in audit and Lean methodologies instilled in me a persistent curiosity for ongoing improvement. I recognised that acquiring experience and expanding my knowledge necessitated engaging in various roles across different organisations. I consistently maintain an active record of continuing professional development by completing educational courses, webinars, journals, and other relevant activities, which ensures my knowledge remains current with advancements and innovations in the healthcare sector. This commitment to ongoing learning is a requirement for membership in the Institute of Biomedical Science (IBMS)[4] and is mandated for registered professionals by the Health and Care Professions Council (HCPC)[5].

Current Role and Organisational Impact

I am an employee of NHS National Services Scotland. The primary objectives are to support the territorial health boards with projects and service enhancements, and to facilitate the exchange of knowledge from various healthcare services. As a member of the Healthcare Sciences section within the Clinical Directorate, a team comprising leaders and managers from diverse healthcare sectors collaborates effectively. The benefits of such a multidisciplinary team include enhanced awareness of national initiatives across different healthcare domains, which would not have been achievable through siloed working.

I am currently leading a pioneering initiative in Scotland, implementing a Pharmacogenetic POCT across eleven health boards. This innovative POCT will identify infants at risk of adverse effects from the aminoglycoside antibiotics, such as Gentamicin. Gentamicin poses ototoxic risks to certain infants possessing a specific genetic variant and may result in lifelong deafness. The test aims to prevent susceptible infants from receiving these antibiotics. The national rollout of this programme necessitates the application of comprehensive knowledge in Quality Management, Change Leadership, and extensive stakeholder communication.

Developing a diagnostic system from inception necessitates the assembly of a substantial project team, with defined roles and responsibilities, and the optimal deployment of individual skills and expertise. As part of this new initiative, I will oversee two additional staff members, who will assist health boards with the initial implementation, continuous monitoring, and data analysis to evaluate the efficacy of the new diagnostic services.

To my younger self, I consistently advise maintaining curiosity while refraining from imposing change. Change is inevitable, and a well-managed change process, guided by strong leadership and appropriate stakeholders, will be perceived as beneficial rather than burdensome.

Reflections on Leadership

Having worked on various teams throughout my career, I have encountered both exemplary and ineffective leadership. This experience has provided me with a strong foundation to learn, grow, and enhance my leadership skills. My diverse roles have expanded my involvement in numerous projects across various scientific disciplines. This has fostered not only an acceptance of change but also an appreciation for the challenges and obstacles that accompany it.

Successful change is seldom the result of an individual's efforts alone; however, the actions of a single person can jeopardise the potential for success.

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LEADING FROM THE ECHO ROOM:

BUILDING RESILIENT TEAMS AND FUTURE LEADERS IN CARDIAC ULTRASOUND

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Leadership within healthcare sciences is frequently linked to official positions and prominent roles. However, in practical application, some of the most significant leadership occurs within clinical environments. Drawing from extensive experience in adult congenital heart disease (ACHD) echocardiography, this publication contemplates leadership exercised through service demands, mentorship of colleagues, support for departmental initiatives, and efforts to elevate the visibility of our work beyond hospital confines. The emphasis is placed on routine leadership activities that cultivate resilient teams and nurture the next generation of healthcare scientists.

Stephen Qadir *is Lead ACHD Echo Physiologist at Liverpool Heart and Chest Hospital, specialising in complex congenital heart disease imaging. With over three decades of echocardiography experience in both paediatric and adult practice, Stephen is passionate about training, mentorship and building a sustainable, high-quality echo service.*

Healthcare leadership is frequently envisioned as activities occurring within offices or conference rooms. Nevertheless, the most authentic form of leadership can manifest within the clinical setting, at the workstation, and during moments when one is guiding a colleague's hand on the probe. In the realm of ACHD echocardiography, the imaging procedures are intricate, the patients are distinctive, and the stakes are considerably high. Over the past year, our team has managed staff shortages, extended absences, and escalating service demands. In such an environment, leadership has entailed hands-on engagement, maintaining the continuity of service, and ensuring that the next generation of physiologists is confident, competent, and prepared to assume future responsibilities.

Leading Through Absence and Pressure

When a senior colleague is absent for an extended period, the gaps are not merely in the rota; they also affect the leadership structure of the team. It is incumbent upon someone to ensure that the service not only persists but also upholds its quality and standards. In my case, this entailed covering additional sessions, making prompt decisions, and collaborating closely with consultants and nurses to maintain the stability of the ACHD service. This was not a manifestation of glamorous leadership nor was it driven by titles or formal announcements. Rather, it was focused on ensuring that patients were attended to, results were accurate, and the team remained supported, even amid an overwhelming workload.

> **"In the realm of ACHD echocardiography, the imaging procedures are intricate, the patients are distinctive, and the stakes are considerably high"**

My experience over those months has shown me that resilience in leadership is often understated. It involves maintaining steadfastness when the system is under pressure, preserving composure amidst stress, and ensuring that the team perceives a psychologically safe environment to concentrate on patient care. Genuine resilience is less about individual endurance and more about creating a stable environment that enables others to flourish.

Mentorship as Leadership & Developing a Learning Culture

One of the most rewarding aspects of my role has been mentoring two junior colleagues. They are at various stages of their careers; however, both are making significant progress. Mentorship extends beyond merely imparting technical skills; it encompasses fostering resilience, judgement, and professional confidence. I utilise my left hand for scanning, as does my other colleague, which results in us frequently sharing the same workspace. These collaborative sessions have proven invaluable for providing real-time feedback, solving problems, and demonstrating that leadership can be personalised, tailored, and supportive.

Beyond individual mentoring, leadership also entails shaping the organisational culture regarding how a team acquires knowledge. In our echo department, we have endeavoured to make learning a daily practice, engaging in discussions

of intriguing cases over lunchtime, collaboratively reviewing challenging scans, and reflecting on successes and areas for improvement. Cultivating a learning-oriented culture necessitates humility from all parties involved.

As a leader, I have come to appreciate the importance of welcoming feedback from junior colleagues who may observe details I have overlooked. Such reciprocal exchanges foster confidence and trust, and they serve to prevent complacency within a high-stakes clinical setting. Leadership in learning is not about possessing comprehensive knowledge; rather, it is about fostering curiosity and making it infectious.

Collaborating and Supporting Colleagues in Leadership

Leadership extends beyond the retention of responsibilities; it involves fostering the development of additional leaders. I have contributed to initiatives such as physiologist-led clinics by supporting senior colleagues. While our leadership styles may differ, I am committed to providing others with the necessary space and support to ensure the success of their projects.

> **“...I have come to recognise that encouragement and empathy are as influential as technical skill”**

Assisting others in assuming leadership roles does not diminish one's own responsibilities; rather, it enhances the overall strength of the department. As team members take on increased responsibilities, patient care benefits accordingly. This approach also promotes a culture of ownership and innovation, facilitating internal growth of leadership capacity rather than reliance on a limited number of individuals.

Within the domain of ACHD echocardiography, collaboration remains paramount. Consultants, nurses, and physiologists each contribute unique expertise. Over the past year, I have appreciated the acknowledgement from consultants regarding my clinical and leadership contributions. Their positive feedback has reinforced a core belief: the most effective teams recognise and utilise the strengths of all members.

A robust team dynamic is founded upon mutual respect, open communication, and shared accountability. Leadership, in this context, involves bridging professional boundaries, ensuring bidirectional communication, and making collective decisions, always with the patient at the forefront.

Resilience and Wellbeing in the Echo Room

Leadership in cardiac ultrasound additionally entails protecting the wellbeing of caregiving professionals. The emotional burden associated with consistently performing ultrasound scans on complex patients can discreetly accumulate over time. As leaders, it is essential to be attentive not only to the technical proficiency of our team but also to their emotional and physical resilience.

Simple gestures, such as inquiring about an individual's well-being following a complex case, modifying schedules when a colleague feels overwhelmed, or acknowledging minor accomplishments, create an atmosphere of psychological safety. During periods of heightened pressure, I have come to recognise that encouragement and empathy are as influential as technical skill. A resilient team is not one that is devoid of fatigue but rather one that feels sufficiently supported to recover and persist.

Elevating the Profile Beyond the Department

Leadership today extends beyond the confines of the hospital. I have been utilising LinkedIn as an educational platform, disseminating insights and case studies to a global audience. It is encouraging to observe colleagues from as distant as Australia engaging with this endeavour, not for personal accolades but because it demonstrates that our initiatives can serve to inspire and inform others worldwide.

Several of these posts have sparked international discussions regarding congenital heart disease imaging and training methodologies. The feedback received has been remarkable: physiologists from other nations have shared their own case approaches, and students have sought guidance. This exchange of ideas exemplifies how professional visibility can foster collective learning and elevate standards on a global scale.

External engagement has illuminated the notion that leadership is not solely about managing a team; it also involves shaping the discourse within your profession and influencing perceptions of patient care and training.

Leadership in the Everyday

If I have learned anything, it is that leadership in healthcare science is not always visible. It occurs in the corridor when you check in on a colleague. It takes place in the echo room when you assist someone with a complex case. It transpires when you step back to allow a trainee to excel, and when you discreetly cover an additional list so that no patient is overlooked.

Designations and titles are useful; however, they do not define a leader. Leadership is evidenced by actions. If those actions result in strengthening your team, enhancing your service, and ensuring patient safety, then you have demonstrated effective leadership.

Conclusion

Leadership in healthcare science emphasises service, influence, and capacity building rather than self-promotion. It encompasses covering for colleagues during absences, mentoring emerging leaders, supporting colleagues' initiatives, and enhancing the international profile of our work. The fundamental objective remains: to improve the department.

FROM CLINICIAN TO LEADER:

FOLLOWING PURPOSE AND REDEFINING LEADERSHIP IN HEALTHCARE SCIENCE

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Danielle Johnson *Associate Dean for Healthcare Science London, NHS England Workforce, Training and Education and Clinical Scientist in Neurophysiology.*

What does your role involve?

In my current role as Associate Dean for Healthcare Science (HCS), I have developed and led the delivery of London's strategy for HCS as it pertains to workforce, training and education. This means leading a core team and our wider regional scientific community towards the vision of having a sustainable, expert, and future-focused London HCS workforce that is well-equipped to deliver high-quality and equitable care.

Our strategic priorities reflect the fact that a multi-pronged approach is required to solve our current complex workforce challenges. I'm focused not only on increasing training programme uptake, but on ensuring these programmes equip scientists with the skills needed for evolving healthcare demands. Similarly, whilst attracting new talent is important, creating supportive and inclusive environments that value and retain our existing workforce and learners is equally crucial for sustainable growth.

The complexity of our current challenges requires innovative thinking and collaborative approaches. I work closely with the London Regional Lead for HCS, the National School of Healthcare Science, regional and national NHS England colleagues, local NHS Trusts and private organisations, universities, and the London multiprofessional 'clinical cabinet'- where we all play our respective parts to meet the vision of making London the healthiest global city and the best place in the world to receive healthcare.

The best part of my role is the people I get to work with – passionate leaders, dedicated educators and committed students. My days are varied, filled with exciting projects and initiatives, and the opportunity to make a positive change.

What have your most significant achievements been in your role so far?

The development of our future workforce relies on maintaining a sustainable, high-quality educator workforce, and this has been a key focus of my role to date. In the first twelve months of my role, I have been most proud of co-developing and delivering the HCS Educator Development Programme[1] to nearly 100 supervisors, mentors, training officers and education leads. This programme was designed to enhance the capacity, capability and confidence of our London HCS educators – educators who often deliver education with no protected time or standardised training on 'what good looks like', and are also battling the conflict between service delivery pressures and educating our workforce. The programme has led to a meaningful increase in confidence for participants across all key learning domains and its impact has initiated further work to provide a consistent CPD offer for educators in the region.

The launch of our 'Careers in Healthcare Science: Virtual Work Experience Programme'[2] was also an exciting moment and source of pride. This initiative addresses the persistent challenge of visibility and awareness of HCS careers and provides accessible and equitable opportunities for students to explore this rewarding career option virtually. This approach breaks down the barriers to accessing traditional in-person work experience; we're helping to diversify our future talent pipeline and encourage young people to consider a career that they may have never thought would be an option for them. This programme has reached almost 7000 young people nationally in less than 6 months and was recently recognised on the Springpod 2025 Impact List[3]. Future plans include after-school sessions that will provide further detail on each specialist area and will connect students with real-world opportunities for in-person work experience, training and employment in their area.

So, how did you get here? What did your early career journey look like to this point?

Like many of us, I didn't set out to be a healthcare scientist – I didn't even know that we existed! I chose a degree in Neuroscience because it combined my A-level subjects (Biology, Chemistry and Psychology) and was a new degree option in a rapidly evolving field. During my studies, it became clear to me that I wanted a career where I could apply my scientific skills and knowledge for the direct benefit of patients and I started looking at post-graduate medicine, believing this was my only option. It was by chance that I came across the Scientist Training Programme (STP) and was fortunate enough to gain a place on this highly competitive scheme immediately after completing my undergraduate degree.

I've worked in a variety of clinical roles, where I have mainly focused on my interests in paediatric neurophysiology and long-term EEG monitoring. The thing I loved the most about these areas of neurophysiology was the opportunity to build a relationship with patients – I can still remember some of the patients I followed through their whole epilepsy surgery journeys.

As I progressed through my career, I took on roles such as STP Training Officer and Sub-service Lead for the Long-Term Monitoring service, building my leadership capacity as well as my management skills and education expertise.

What was your first step into leadership?

I never saw myself as a 'natural leader'. I didn't fit the image of the dominant, assertive, and extroverted individual we often describe in this way. I started seeing myself as a leader when I began following my purpose. In 2020, I took a career break and spent 12 months in the Caribbean, returning with a better understanding of myself, my values and my own unique meaning of success. That was when I started standing more confidently in my authentic self and moving towards the things that really mattered to me.

Outside of my clinical roles, I sought more opportunities to work with young people, initially volunteering as a STEM Ambassador to deliver talks in local schools and becoming involved in projects such as In2 Science and 'A Scientist Just Like Me', which aimed to promote diversity, representation and social mobility. Over the past five years, I have developed as a mentor and coach, using my experience to support others in their professional journeys. Sparked by my own personal experiences both inside and out of the workplace, I also started to more visibly demonstrate my commitment to equity, diversity and inclusion (EDI) around this time, taking on roles such as EDI Lead at the Association of Neurophysiological Scientists (ANS), where I authored the first EDI strategy and convened a national working group.

> **"I didn't set out to be a healthcare scientist – I didn't even know that we existed!"**

Hungry to break out of my neurophysiology niche and explore my potential to deliver a broader impact on healthcare, at the end of 2022 I applied for a Level 7 Senior Leader Apprenticeship and shortly after this, I hesitantly submitted an application for a part-time secondment with NHS England (then Health Education England) as Project Lead for Neurophysiology, Respiratory and Sleep. To my surprise, I was offered a full-time position combining this role with that of Healthcare Science Workforce Transformation Lead. Over the next two years, I worked on several projects to enhance training capacity in those specialisms, whilst also managing the education commissioning processes for all healthcare science training programmes and leading on initiatives to improve education quality across London. This new role, combined with formal leadership and management training allowed me to start finally seeing myself as a leader – although on reflection I had been demonstrating leadership through influence and purpose for years before.

How did you find the transition from a clinical role to a leadership role?

The transition from patient-facing work to strategic leadership required me to adapt to a fundamentally different way of working – this presented many challenges which are rarely discussed openly. Highly structured days packed with tightly scheduled outpatient appointments and high-pressure inpatient visits suddenly changed to days spent sitting at a desk on back-to-back MS Teams meetings. Feeling like one of the most specialist and knowledgeable Clinical Scientists in my department suddenly changed to not really understanding what was being discussed by my colleagues and learning new tasks daily. I found working from home quite isolating and missed the immediate sense of achievement and fulfilment that comes from direct patient care. At times, imposter syndrome made me question whether I'd made the right decision and would be able to succeed in this new role.

Clinical work provides clear boundaries and immediate feedback – you know when you've completed a successful investigation or provided reassurance to an anxious patient. On the other hand, strategic leadership roles often involve incremental progress toward distant goals, which may or may not come to fruition, making it harder to experience that same sense of daily accomplishment (see table 1 below). Coaching was a real help to me during this time; it built up my self-confidence and provided me with valuable tools for self-reflection and growth, many of which I have continued to use.

I've found it important to ensure I am working on a mixture of projects at any one time – balancing work towards quick wins with longer strategic projects so I feel a sense of fulfilment and combining the tasks that give me energy with those I find more draining. Fortunately, my recent roles have been flexible, and I have been able to pursue projects aligned to

Table 1. Comparison between Clinical and Leadership Roles:

CLINICAL ROLE CHARACTERISTICS	LEADERSHIP ROLE CHARACTERISTICS
Immediate feedback and visible outcomes	Delayed feedback and uncertain outcomes
Clear task boundaries and completion	Complex and ambiguous problems with no clear endpoints
Direct patient impact and gratification	Indirect impact through system change
Structured daily schedule with predictable elements	Meeting-heavy schedule with frequent context switching
Specialist technical expertise as primary currency	Generalist knowledge, influence and relationship-building as primary currency

my own areas of interest, including maintaining a connection to clinical neurophysiology, providing guest lectures to STP students and working with local universities to develop new fellowship opportunities for our scientists. I love my current role and find the many ways I could make a real difference both motivating and exciting.

How does your background as a Clinical Scientist support you in your role?

I apply my experience in neurophysiology every day in my role and think it is so important that we have healthcare leaders with real world experience of clinical settings. Understanding the patient pathway and the patient perspective, as well as the reality of the challenges faced by our workforce as it relates to workload, pressure, and the many barriers to education and training, is central to my approach.

A clinical background also provides a wealth of transferable skills which are essential as a leader – communication, interpersonal skills, analytical thinking and problem solving, to name only a few.

What is your mission as a leader? What drives you?

My personal values of authenticity, integrity, inclusion and compassion are central to my leadership philosophy. These values aren't abstract concepts but practical guides that shape my daily decisions and behaviours. At its core, my leadership is motivated by the potential impact I can have on three key groups – patients, learners and the workforce.

Likely as a result of my own negative experiences as a trainee, I am determined to ensure our London learners are placed in supportive and inclusive learning environments. I am driven to ensure our London educators feel valued, appreciated, and able to enjoy their roles without the all-too-common effects of stress and burnout. I am fuelled by my ability to contribute to the experiences and outcomes of our patients by providing high-quality healthcare services that tackle, rather than perpetuate, health inequalities.

On a more personal level, my mission is to inspire and empower aspiring and existing healthcare scientists, particularly those from underrepresented backgrounds, to navigate their own careers, harness their own leadership strengths and build confidence. I have learnt a lot from my own journey and want to use that to support others.

Why is this important?

I am consciously aware of my 'other-ness' in many of the spaces I exist in – whether it's when I recognise that I am the only woman or person of colour in a senior leadership meeting, as I listen to colleagues' conversations about their personal lives and assess whether it's safe to mention my same-sex partner, or when I stare blankly at the person who approaches me after my conference presentation to tell me I look too young to be doing this role.

The James Baldwin quote "The place in which I fit will not exist until I make it" sits framed on my bookshelf, reminding me that I need to be the one to create the space for myself and others who don't fit into the neat boxes society creates for us. It's my daily reminder to push boundaries, challenge the status quo and stay true to my authentic self.

Diversity is one thing, but creating truly inclusive spaces is what I'm really striving for. Having a workforce and leadership that reflects the population we serve is imperative if we are to address health inequalities. And looking outside of where we might traditionally look for scientists and leaders is essential to obtaining the workforce we need, and for generating the innovative ideas and approaches that our healthcare system needs.

What are you looking forward to?

This is an exciting time for the NHS. The 10-year plan outlines three shifts: from analogue to digital, from sickness to prevention, and from hospital to community – and HCS will have a key part to play in all.

I'm looking forward to shaping the evolution of HCS training and education to meet new delivery models. Traditional training models will need to incorporate greater flexibility, interdisciplinary approaches, and advanced digital competencies. Creating educational pathways that prepare scientists for these shifts while maintaining core scientific rigour presents an exciting leadership challenge.

HCS often work in small, dispersed teams across large organisations, creating challenges for professional identity and community. Over the next few years, building networks that connect scientists across specialisms and organisations will be even more crucial for sharing innovation, providing peer support, developing collective leadership capacity and embedding a sense of belonging.

As I continue my leadership journey, I will also remain committed to developing a HCS workforce that is more representative of our London population and creating pathways for others who, like me, might struggle to see where they fit. By demonstrating authentic and compassionate leadership, challenging exclusionary systems, and showcasing the power of quiet leaders, I hope to contribute to a HCS profession where talent is recognised and nurtured regardless of background, identity or career path.

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Danielle shares many updates and opportunities via the London HCS network Futures page.
London Healthcare Science Workforce, Training and Education – Futures

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A VERY SENIOR LEADERSHIP PROGRAMME FOR HEALTHCARE SCIENTISTS:
BENEFITS, LEARNING AND A CASE STUDY

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At the time of writing, work is progressing on developing the curricula that will support the new NHS Management and Leadership Framework. It is timely to share the evaluation of the Very Senior Leadership (VSL) development programme for healthcare scientists, run by AHCS from April 2024 to 2025, and to identify learning for future VSL courses for healthcare scientists. The article concludes with a case study on reducing unnecessary patient testing, highlighting where learning from the course helped to bring about behavioural change.

Dr Joy Tweed

The very senior leadership programme for healthcare scientists

Professor Dame Sue Hill, the Chief Scientific Officer at NHS England, asked the AHCS programme lead (and author of this article) to research appropriate courses for healthcare scientists (HCS) operating at, or intending to operate at, a very senior level, including working across systems. Whilst there were existing leadership programmes for clinicians,

Figure 1 How a Very Senior Leadership programme adds value for HCS

INPUTS	ACTIVITIES/OUTPUTS	IMMEDIATE OUTCOMES	WIDER BENEFITS	LONG TERM CHANGE	
VSL Programme:	Future Vision (FV) Leadership programme	New areas of responsibility	Improved career trajectory	Boost talented individuals	Improve health and care
	Coaching one-to-one support to develop	Improved leadership skills	Better equipped individuals	Increase talent pool	
	International exposure Boston Visit (FV plus HCS bespoke days)	Empowerment: Credibility, conviction, creativity, confidence	Openness to ideas/ wider horizons	Improve organisations involved	
	Seminar programme: Meetings with key people, developing contacts, shadowing opportunities	Support others to develop/ improve	Better team/org reputation	Improve wider sector	
	Support of small group	Knowledge & Skills	Better service delivery locally	Improve national policy	
		Encouragement/support network	Increased innovation	Increased impact of HCS nationally	
		Lasting connections and contacts beyond typical	Participants/HCS informs service delivery nationally		
		Increased knowledge of HCS beyond usual sphere	Participants/HCS informs national policy		
		Able to have impact on systems beyond organisation	Increased ability to affect positive change & to support staff		
		Goodwill: network of advocates/ contributors			

none met all the agreed programme outcomes essential to any leadership programme for HCS. These were informed by the needs identified in the Chief Scientific Officers' workforce strategy (NHSE 2020)[1]; conversations with key stakeholders and a literature review. These programme outcomes covered four areas: effective systems leadership, scientific leadership, personal leadership effectiveness, and the ability to influence change and innovation positively.

A helpful conversation was had with the team at the Health Foundation[2]. They shared their theory of change to articulate and visualise how their programmes increased leadership capability within organisations and added value to their mission. Their model was adapted for this programme, with input from key stakeholders and participants. *See Figure 1.*

A tailored leadership development programme was therefore developed. This consisted of participation in a senior leadership development course, 'Future Vision', run by the Leadership Centre and the Birmingham Leadership Institute, accompanied by a bespoke programme of seminars and meetings with key people. A visit to the USA (Harvard, Massachusetts Institute of Technology, and Boston Children's Hospital) was also planned as an additional programme to complement the work in the UK. Four participants were selected after a comprehensive assessment and selection process.

Challenges of the evaluation of leadership development programmes

One of the key evaluation challenges is the lack of a counter-factual, i.e. it is not possible to compare how the same person might have developed as a leader if they hadn't completed the course. Leadership is also contextual. Differing contexts may mean that one graduate of a leadership programme has the opportunity to exercise leadership in an effective manner, whilst another graduate may either lack the opportunity or the situation they face may thwart or hinder leadership efforts.

> **"Overall, the programme was rated highly by the participants..."**

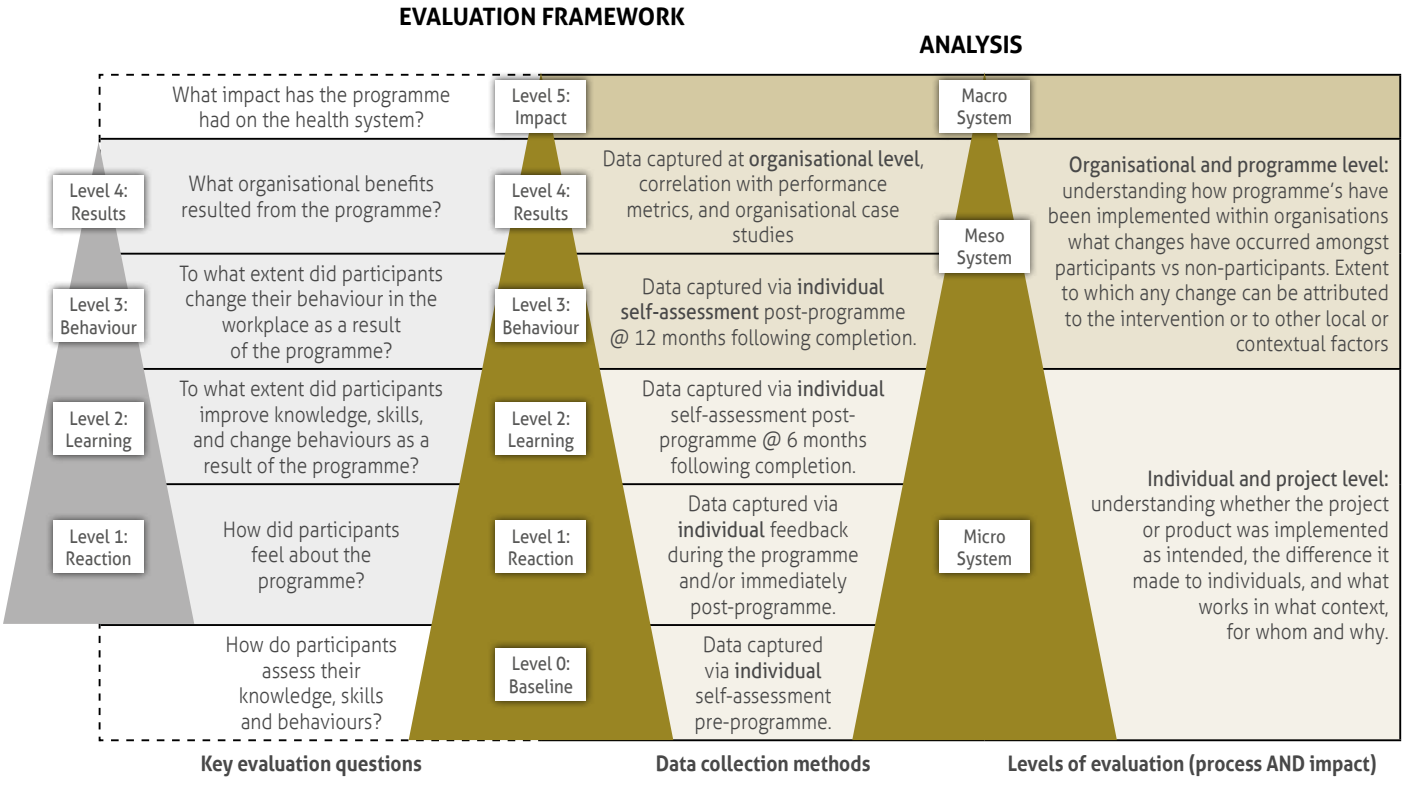
Whilst acknowledging these challenges, some approaches can be used to evaluate the effectiveness of leadership programmes.

Kirkpatrick and Kirkpatrick's (2006)[3] four-level evaluation model is widely used. Within this model, Level 1 refers to the reaction and participants' level of satisfaction with the programme content and organisation. Level 2A captures a change in attitudes, and Level 2B relates to a change in knowledge or skills. Level 3A encapsulates self-reported behavioural change, and Level 3B captures behaviour change as recognised by a third party. Level 4A captures self-reported organisational outcomes. A draft version of an evaluation framework utilising Kirkpatrick's different levels was shared by the Research, Evaluation & Insights Team, Leadership and Management Centre of Excellence, NHS England, and used as one evaluation approach.

With reference to this framework, data were collected on levels 1, 2A, 2B, 3A, and 4A (reaction, learning, behaviour, and results) using the Kirkpatrick evaluation model. *Please see Figure 2.*

Overall, the programme was rated highly by the participants and felt to have been of personal and organisational value. Participants assessed their knowledge and skills in the four

Figure 2 Kirkpatrick and Kirkpatrick's evaluation model, as adapted by the Research, Evaluation & Insights Team, NHSE



From left to right: Didi (Emmanuel) Akinluyi, Victoria Chalker, Joy Tweed (middle), Kirsty Gordon and Kimberly Gilmour

programme areas at the start of the course and again at the end. This evaluation demonstrated an increase in self-assessed expertise and abilities in all programme areas. Participants also reported behavioural changes and organisational outcomes following attendance at the programme. On the final day of the programme, the four participants shared a case study from their areas of work with key stakeholders; one case is reported after the Summary.

Summary

Key benefits/strengths of the programme, as identified by participants, were:

- The value of being part of a leadership programme with participants outside of the NHS, and the insights and connections this enabled,
- Within this leadership programme, theories/models of leadership, innovation, and supporting people through change were highlighted as particularly valuable. They had an immediate impact on how participants managed projects or introduced innovation.
- The value of an additional complementary programme (UK and USA) specific to healthcare science, enabling additional learning opportunities and connections to key people, with the support of the CSO, England.
- The benefits of being part of a small cohort and the support this offered,
- The benefits of coaching.

Whilst the programme may not run again in its entirety, the elements above can help inform how to continue developing healthcare scientists as very senior leaders within the NHS and across systems.

CASE STUDY

The case included here is provided by Dr Kimberly Gilmour, Chief of Laboratory Medicine at Great Ormond Street Hospital for Children NHS Trust (GOSH), who was one of the participants on the course. It demonstrates how learning from the VSL programme enabled her to effect change, with benefits to patients and financial savings for the Trust.

A national goal for laboratory medicine is to ensure the proper test at the right time for the right patient. GOSH laboratories identified several tests being requested more frequently than guidelines recommend. In May 2024, the GOSH clinical insight unit identified the most common over-requested tests, with 6.9% of Vitamin D requests (21,206) sampled earlier than the recommended minimum testing interval. Children were being bled unnecessarily, and the extra laboratory costs were £43,356.00 over 1 year. Previously, the labs blocked unnecessary testing. This had limited benefit, however, as the sample had already been collected from the patient, subjecting them to excessive bleeding, swabbing, and uncomfortable nasopharyngeal aspirate tests. It required time for staff to collect the sample and then block the test; and, it used consumables that contributed to plastic waste.

Initially, to address this unnecessary testing, I worked with our IT system EPIC (EPIC Systems Corporation) to have a pop-up appear whenever a Vitamin D test was requested before the defined set time limits.

The pop-up displayed the most recent result, stated that the new test is requested earlier than the minimum time frame, and prompted the requester to click 'Yes' if the test was still required or 'No' if it was not. However, this made no difference at all.

Having started on the VSL programme, I began focusing on my behaviours and assumptions, as well as others. I learned about system change and techniques to overcome resistance to change. I focused on defining the boundaries of an issue and understanding that there is an area of productive disequilibrium that might result in change.

Utilising my developing knowledge and skills, I spoke with the clinicians requesting the test, our preanalytical biomedical scientist, and the GOSH clinical intelligence data unit. Although we had several ideas, we needed more insight into the reluctance to change, so we met with the UK government Behavioural Insights Team[4]. We worked with them to understand why the original pop-up did not change behaviour, why clinicians were ordering this test more frequently than recommended, and what we could do to prevent over-ordering. Understanding that one of the primary motivations of the requestors was to ensure optimal patient care, I used the empathetic bridge[5] to explain the impact of reducing tests from the patient's perspective. We held two productive workshops that identified factors in over-testing, including people's responses to authority (real or imagined, e.g. "the consultant told the SpR/nurse to do it"), concerns about missing something, overinterpreting comments, and being too busy to find the previous results in the system.

When EPIC was built in the United States for US customers, one principle was that clinicians should be able to request what they want when they want, and hard stops and other methods of test reduction were not considered. Until recently, as US labs bill for whatever is requested, there has not been the impetus to reduce unnecessary testing. As a result of working with EPIC and the Behavioural Insights Team workshops, we devised a Best Practice Advisory (BPA) that started with the requester's name to grab their attention, highlighted this as a potential unnecessary test, clearly provided the previous results, had the statement, *'Please consider removing this order as it may result in unnecessary invasive action without presenting an additional clinical benefit' and the motto 'Zero waste, Zero Harm'* and had 'Remove' as the default button. The BPA for Vitamin D has run for 3 months, and we have expanded to additional tests. Preliminary data show a decrease in unnecessary testing.

> **"A national goal for laboratory medicine is to ensure the proper test at the right time for the right patient"**

Learning from this project has helped optimise the BPA and highlighted the impact of clinical comments on test results; therefore, several comments are being reviewed and optimised to help avoid unnecessary repeats. If these BPAs and comment changes are implemented across the top 10 over-requested tests at GOSH, a 50% reduction in unnecessary testing, will result in a saving of £137,130 per year of lab costs alone. This system stops the initial sample from being collected, avoiding patient discomfort, reducing phlebotomy and laboratory costs, and reducing plastic waste. The learning from the project is already being shared.

The VSL programme provided me with the knowledge and skills to help me change my approach. In particular, I found it helpful to learn more about the concept of Immunity to Change[6] during our time at Harvard in Boston. There and throughout the programme, I learned about complex system change and why the problems I may have previously considered technical may instead require a complex systems solution. By collaborating with many teams locally, nationally, and internationally and working better with complexity, more effective, lasting solutions may be achieved.

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"BUT YOU DON'T LOOK AUTISTIC": CHALLENGING PERCEPTIONS AND CREATING INCLUSIVE LEADERSHIP IN HEALTHCARE SCIENCE

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If you had told me 20 years ago that one day I would be the professional lead for 7000 healthcare scientists, I would have laughed at you or smiled awkwardly and looked for an exit from the conversation. It was not something I would have ever considered. Partly because I would always avoid talking to people I did not know, partly because I could not handle any change to my routine, and partly because I had never seen people like me in leadership positions.

I am autistic. It is standard for people to prefer to be identified as 'someone with autism' because they do not want to be defined by their condition, but for me, it is part of who I am. In many ways, the world has moved on in the last 20 years, but when it comes to autism in leadership, I am not convinced it has.

To back up my point, can you take a moment to name as many people in leadership positions who are openly autistic as you can? Can you reach five, or are you still counting them on one hand? I guess that it is not many, because there are not that many.

It is estimated that around 700,000 people in the UK have autism, but they are far less common in the workplace[1]. In the UK, autism is classified as a disability because it has substantial and long-term effects on everyday tasks[2]. According to the Office for National Statistics, only 29% of people with autism are in any form of employment, and apart from those with severe learning difficulties, this is the lowest employment rate of any disability in the UK. The average employment rate is 53.5%, compared to 81.6% for the non-disabled UK population[3].

On top of this, for the 29% of autistic people who are in employment, there is a significant pay gap! The median hourly earnings of employees with autism are 27.9% lower than those of employees without disabilities, which does not bode well for people with autism in senior leadership positions[4].

> **"...if a workplace cannot understand and support autistic staff, how can it be sure it is supporting its autistic patients?"**

Why does this matter? Should we be concerned? I think so. The lower salaries and smaller number of employees indicate that workplaces are not effectively supporting autistic employees. We know that employment status can affect health outcomes, and so providing improved opportunities can help to reduce health disparities[5]. If workplaces do not provide an environment where staff with autism can thrive, they are unlikely to progress into leadership positions.

If we consider healthcare and healthcare science services, if a workplace cannot understand and support autistic staff, how can it be sure it is supporting its autistic patients?

I know that my personal experience is not the standard one. My career has progressed very quickly. I was fortunate to be offered a Band 5 post in the NHS while still at school. I was a Band 8a in my twenties, and in my thirties, I was offered the role of Chief Healthcare Science Officer for Wales. From the outside, it might look like I have not struggled or found my autism a challenge during my career, but unfortunately, that is not true.

Vicki Heath *Job title: Chief Healthcare Science Officer, Welsh Government*

Role: The professional lead for the 7000 healthcare scientists working throughout the NHS in Wales. Responsible for providing advice to ministers related to healthcare services and for representing healthcare scientists within Government.

Two common practices among autistic people are masking and camouflaging. Masking is essentially pretending not to be autistic, and camouflaging is copying social behaviours seen in others[6]. Masking is not unique to the autistic community; most of us will highlight or cover up parts of our personality in specific situations, but it is generally less frequent. Autistic people often exhibit these behaviours to avoid discrimination, isolation, or even bullying.

Masking may also involve covering up common autistic behaviours such as stimming, which is when someone uses repetitive motions or sounds to calm themselves or regulate emotions[7].

For those who mask, there is a fear that being honest and open about their feelings will lead to repercussions. I still remember taking part in a team-building exercise and being told that 'I was not engaging with the process' when I answered a scenario question honestly.

> **"It has its uses, but masking is exhausting and can lead to autistic burnout"**

My masking is apparently convincing enough that I have been told more than once that I 'do not look autistic' and asked to consider whether the diagnosis was accurate. This would not be acceptable with any other disability, so I do not see why it should be acceptable with any neurodivergent condition. It has its uses, but masking is exhausting and can lead to autistic burnout.

On the other hand, I have also been fortunate to meet many very supportive individuals, as well as other autistic healthcare scientists. As I have progressed in my career, I have seen examples of positive support within services. In my current role, I am fortunate because there are personalised and well-developed processes to support neurodivergent staff.

As this is an article on leadership, I would love to give examples of how we should support autistic healthcare scientists into leadership positions. However, I am going to take a step back and say that we should start by ensuring that all our healthcare science services are supportive of autistic employees at all levels.

There are a few things we can all do. The first is to ensure that all our staff understand neurodivergent conditions. Several Trusts and Health Boards now offer Autism Awareness training, but it is often focused on patients rather than staff, and it is not always implemented in a way that shows thought for neurodivergent staff. I once attended training to support autistic patients who wanted to demonstrate over-stimulation in autistic patients to the attendees. So, they did so without warning.

Another is to appreciate that if you are not autistic, it is difficult to understand the impact that seemingly small events can have. 'We are all a little bit autistic' generally comes from a place of allyship, particularly among healthcare professionals keen to support, but it is not true. We may all have traits that are similar to autism, but they do not have the substantial impact on daily tasks that are part of the diagnosis.

It is now understood that autism is not a spectrum in the sense of a linear progression; it is a spectrum in which each autistic person has a distinct combination of characteristics. So, what works for one person may not work for others, and that means the best way to support autistic staff is to find out what is most appropriate for that individual.

This support might include the ability to work from home, where the service allows, so that the stress of the commute does not affect the rest of the day, or the provision of noise-cancelling headphones in an open-plan office. It might also involve developing a culture in which stimming is not something that staff feel they need to hide.

For me? If we are ever in a meeting together, you might notice me knitting. It is not me being rude and ignoring you; in fact, it is the opposite. Rather than some of the more obvious stims, I channel mine into something that produces an output while still giving me focus. Although I also appreciate it being ignored rather than commented on.

There is a real opportunity within healthcare science for us to improve the lives of the autistic community by providing supportive workplaces, and I would love for healthcare science to lead the way.

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LEAN BUT NOT FRAGILE:
REDESIGNING A NEUROPHYSIOLOGY SERVICE THROUGH AUDIT-VALIDATED SELF-REPORTING

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This article describes the redesign of a neurophysiology service in a UK district general hospital, transitioned to a self-reporting model led by a single physiologist. Initially, a pragmatic response to workforce constraints, the structure was formally validated through audit and comparative agreement studies between medical and non-medical reporters. The redesigned service now integrates testing, interpretation, reporting, and service management within a unified workflow. Audit data demonstrates improvements in timeliness, clinical responsiveness, consultant time savings, cost savings, and operational stability – achieved not through unchecked expansion, but via structural coherence and audit-led scope refinement. Operational stability was earned through interpretive consistency, workflow consolidation, same-day reporting, and governance-shaped boundaries that reduced variability in delivery. It demonstrates that even a lean structure – when anchored in audit and agreement studies – can preserve and enhance diagnostic service delivery. While such a model (sole physiologist) presents unique challenges, the transferable insight lies in scope expansion and audit-verified self-reporting, not necessarily in the replication of reduced or minimal staffing models.

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1 Introduction

This paper outlines the redesign of a neurophysiology service within a UK district general hospital, transformed from a reactive, fragmented model into a coherent, fully self-reporting structure led by a single clinician. What began as an inherited pattern of operational firefighting has become a deliberate, evidence-aligned system: audit and agreement studies confirmed that EEG (electroencephalogram) and Nerve Conduction Studies (NCS) testing, interpretation, reporting, service coordination and diary planning could be safely integrated within a unified workflow. Rather than reverting to historical fragmentation, the department moved towards structural coherence - achieving responsiveness, sustainability and continuity not through scale, but through design. The resulting model emphasises reproducibility, governance maturity and the potential for replication, with each component tested through audit rather than accepted through historical practice.

> **"Staff departures without a structured handover revealed vulnerabilities"**

2 Background and Initial Pressures

Serving a population of approximately 500,000, the neurophysiology department at the Royal United Hospitals Bath (RUH) provides EEG and NCS testing across outpatient clinics, ward settings, ITU and neonatal care. Historically, EEGs were interpreted remotely at a regional centre, while NCS studies were reported locally by a consultant neurologist (figures 1 and 2). The department has long operated as a single physiologist service, and my predecessor retired several months before I started.

When I joined in May 2023, the underlying fragility of this singlehanded model had become clear. The average wait for an adult EEG had risen to 134 days. Further instability occurred when the reporting EEG consultant sustained an injury, creating additional delays and a growing backlog with no contingency arrangements. To maintain clinical flow during this period, I provided informal, provisional reports to prevent stagnation of urgent cases.

As clinical risk increased and interim measures proved insufficient, the team examined whether evidence - particularly audit and comparative reporting - could inform a safer, more sustainable redesign. This raised a central question: was the traditional dual contributor model - where physiologists provided the technical description and

consultants added the clinical conclusion - necessary in every case? If structured audit could demonstrate agreement, could a single performer-reporter model safely integrate both functions within one workflow?

3 Governance Review and Agreement Study

A formal governance review was initiated, centred on a comparative agreement study assessing consistency across EEG and NCS reports. The analysis demonstrated high interpretive concordance and supported selective self-reporting within defined boundaries. Paediatric EEGs were intentionally excluded from the initial scope; however, the recent appointment of a 0.2 FTE consultant scientist with paediatric expertise will enable phased expansion of this area in the next stage of service development.

Findings were consolidated into a governance paper and presented at Trust forums, supported by national workforce reviews and Get It Right First Time (GIRFT) data. Audit projections quantified the benefits of the redesigned model, including reductions in medical consultant time, improved throughput, and faster reporting responsiveness. What had begun as an interim workaround evolved into a validated clinical framework, underpinned by systematic audit and aligned with contemporary governance expectations

4 Workflow Redesign and Clinical Ownership

Following governance approval, the self reporting model was formally adopted. Its core features include:

• Unified clinical ownership: The same clinician performs, interprets and reports each study, ensuring continuity and eliminating fragmentation.

• Same day reporting: Most reports are completed within hours, allowing EEG and NCS findings to influence real-time clinical decisions.

• Integrated diary and workflow management: Clinical rhythm, capacity and service flow are deliberately controlled rather than inherited.

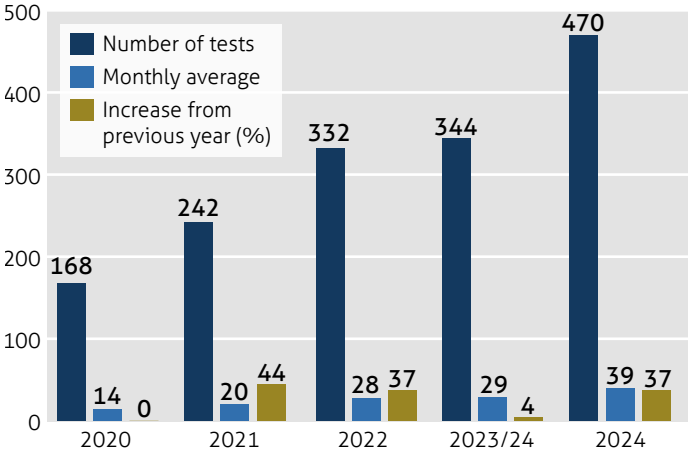
• Continuous audit and data capture: Performance metrics guide service adjustments, such as clinic scheduling or retrospective reporting checks.

• Minimal external processing: Removing dictation and transfer delays enhances immediacy and reduces administrative friction.

A 2026 work plan underpins this model, defining measurable throughput expectations and ensuring that capacity, risk and service flow remain transparent within a single clinician structure. Despite a minimal staffing profile - comprising a single Band 7 physiologist - the service absorbed rising demand and daily fluctuations in urgent EEG referrals. Interpretation and reporting are now fully integrated into the clinical process, creating a coherent, responsive workflow that replaces the previously fragmented model.

5 Audit Outcomes and Operational Gains

Audit continues to monitor impact, with current performance indicators showing:



Metric	Outcome
Consultant Time Released	225 hours/year (91 regional, 134 local)

Physiologist-Reported EEGs	Now increased to 100% of adult EEGs
Same-Day Reporting Rate	Adult EEG Q1 2025 – 86% returned on day of testing
NCS Volume Growth	+29% (2024 vs prior year); +94% over three years
Estimated Financial Impact	£71,000 initially; projected approximately £102,000 next phase
DM01 Compliance	Improved despite rising demand

Structure – not staffing volume – enabled responsiveness and resilience.

***Figure 1** – NCS Volume Growth – 2021 to 2024: Depicts a 94% increase in physiologist-led NCS delivery, reflecting increased demand and internal efficiency gains.*

***Figure 2** – EEG Diagnostic Wait Times – Rolling Reduction Trend: Shows monthly improvements in adult and paediatric EEG wait times, highlighting impact of internal efficiency despite referral volatility.*

6 Diary Planning and Flexibility Within a Solo Model

A strict diary structure underpins the viability of a solo-led neurophysiology service. The working week is divided to balance core clinics, reporting, equipment checks, service

administration and capacity for ad-hoc demand. Clinic sessions are fixed and non-negotiable, while remaining time is prioritised according to clinical necessity. Inpatient EEG volume fluctuates, creating ongoing tension between maintaining outpatient throughput and accommodating short-notice referrals.

Flexibility is created through structure rather than general availability. The 2026 work plan formalised this by protecting non-clinic time, fixing inpatient EEG slots and distinguishing direct clinical care, supporting professional activities and in-hospital time from remote work. This provides transparency around capacity and risk within a single-clinician model. Without internal redundancy, unplanned demands - urgent meetings, mandatory training, governance requirements or equipment downtime cannot be absorbed without consequence. With outpatient clinics rigidly booked, such requests require either cancelling patients or declining the activity.

> **“The model does not assume continuity – it plans for disruption”**

Some gaps remain irreducible. Inpatient EEGs cannot be performed in the clinician's absence, and uninterrupted weekday coverage - let alone seven-day provision — is not achievable with one clinician; a minimum of two is required for sustainable year-round resilience. The imminent addition of a 0.2 FTE clinical scientist specialising in paediatric EEG, whose remit is currently entirely paediatric, will free adult capacity and begin to stabilise inpatient coverage while enabling paediatric EEG to be incorporated into the self-reporting workflow.

Leave is inevitable, and its impact is managed through additional clinics before and after planned absences. The model does not assume continuity; it plans for disruption. Interruptions cannot always be absorbed, and some pressures remain structural. Larger services buffer disruption through redistribution and scale. In a solo model, the threshold for interruption is lower, but the design is intentional. Containment is planned.

7 Limitations and Safeguards

The primary limitation of a solo clinician model is the absence of internal redundancy. All operational pressures flow from this: unplanned demands, equipment downtime, urgent governance tasks and last minute meetings create cognitive load and require constant prioritisation.

Safeguards mitigate, but cannot eliminate these risks. Interpretive isolation is reduced through reporting transparency, documented protocols, escalation pathways, MDT participation and periodic EEG agreement audits with another reporter. Early agreement studies provided an initial safety net, demonstrating concordance and validating physiologist led reporting before adoption. The clinical scientist upgrade pathway for practitioners trained before formal equivalence routes offers an additional longterm safeguard for scope stability and professional resilience.

The ITU EEG SOP (Standard Operating Proceedure), aligned with the European Resuscitation Council/European Society of Intensive Care Medicine (ERC/ESICM) Post Resuscitation Guidelines 2025 and the American Clinical Neurophysiology Society (ACNS) Standardised Critical Care EEG Terminology 2021, embeds standardised interpretation criteria and clear escalation routes for complex cases, consistent with Good Scientific Practice. Time sensitivity is managed through the structured 2026 work plan, which fixes inpatient EEG slots, protects non-clinic time and prioritises planned sessions and triaged referrals while retaining limited capacity for ad hoc demand. The model ultimately relies on deliberate prioritisation rather than elasticity.

8 Transferability and Local Adaptation

The model requires defined scope and controlled diagnostic boundaries and its benefits may not be limited to district general hospitals. In regional neuroscience centres, physiologist reporting of EEG and NCS could liberate medical consultant time for procedures such as electromyography (EMG), where demand often exceeds capacity. The absence of a formal qualification route for clinical scientists to achieve EMG competence remains a national constraint.

Successful replication depends on:

- local agreement studies
- embedded audit and governance
- clear communication of responsibilities
- consultant dialogue and IT/administrative support

The underlying principles are presumably transferable across other healthcare science domains. Where appropriate, scope expansion can support professional progression and, in my experience, strengthen morale, engagement and workforce resilience.

9 Conclusion

This model is evidence based, scope specific and audit supported. It has maintained diagnostic responsiveness, liberated medical consultant availability and strengthened structural clarity. The service has now become autonomous within RUH, with EEG and NCS and EMG performed and reported locally, supported by internal governance structures, escalation pathways and audit mechanisms. A consistent principle across the service is that clinicians report the studies they perform, ensuring continuity, accountability and alignment between technical execution and clinical interpretation.

10 Necessary Acknowledgements

Although this article outlines a sole physiologist model, its viability depends on coordinated team support. Mindful referrals from Neurology, ITU and Paediatrics have preserved diagnostic rigour and workflow sustainability. Administrative colleagues have increased operational bandwidth. Senior management has provided strategic continuity throughout the model's evolution. Scope boundaries are respected and regularly reaffirmed. The model remains structurally coauthored.

LEADING ON LOAN:
LEARNING TO ADAPT AND THRIVE ON SECONDMENT

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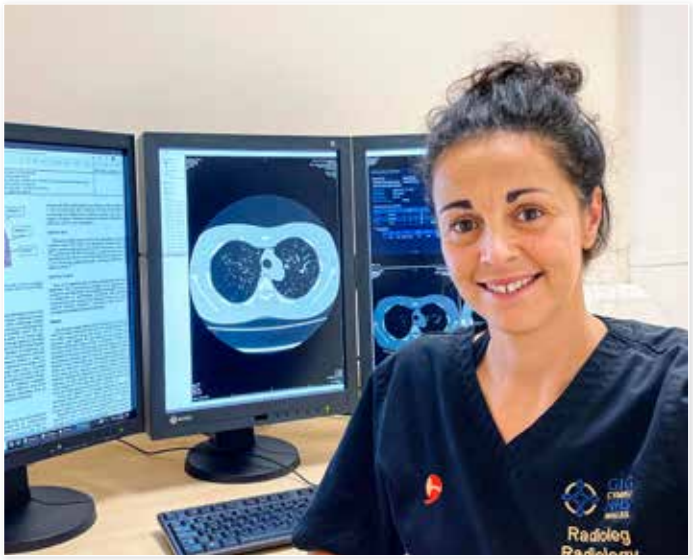
Secondment opportunities within the NHS have increased considerably in recent years. This change reflects a broader move towards flexible workforce development, cross-organisational collaboration, and talent retention. A secondment involves a temporary transfer of an employee to a different role, department, or organisation for a specified period. It aims to benefit both the individual and the service by allowing the development of new skills and broadening experience in a different environment. It also helps meet short-term staffing needs for specific projects, while supporting career progression without necessitating a permanent move. This brief reflective article examines my two recent secondment experiences, highlighting how they promoted my leadership development, encouraged adaptability, facilitated the acquisition of new skills, and empowered me to make a meaningful and lasting impact.



Dr Jenna Tugwell-Allsup *is a research radiographer at Betsi Cadwaladr University Health Board, leading, facilitating, and supporting research initiatives locally, nationally, and internationally across radiography and the wider healthcare landscape. After qualifying with first-class honours from Bangor University in 2008, she worked as a general and MRI radiographer before moving into research in 2012. Jenna completed an MPhil in 2016 and a PhD by Published Works in 2021, focusing on optimising image quality and radiation dose. Her research spans AI in imaging, observer variability, MRI anxiety, and oncology imaging. She has led portfolio studies, published widely, and plays an influential role nationally through advisory and editorial boards, contributing to guidance development and reviews for the Society and College of Radiographers, Health and Care Research Wales, and Health Education and Improvement Wales, as well as shaping research policies across multiple networks. Locally, as deputy chair of BCUHB's Research and Innovation Board, Chair of the Healthcare Science R&I sub-group, and Effectiveness, Improvement and Audit radiography lead, Jenna influences strategic research direction while teaching and supervising at Bangor University.*

Making that decision

Pursuing a secondment opportunity can be daunting, as it challenges one's professional boundaries and necessitates discipline and dedication to manage time efficiently. Both of my recent secondments were undertaken on a part-time basis, which required balancing the responsibilities of the secondment with those of my substantive position. I have learnt that meticulousness is essential when aiming to accomplish meaningful outcomes, given that days and hours seem to slip away rapidly.

The initial period of secondment involved examining the current challenges and opportunities related to practice-based learning for diagnostic radiography and imaging in Wales. This was aimed at optimising placement capacity while maintaining the highest standards of clinical experience for undergraduate students. The focus centred on a single key area: placement capacity, within the specific profession of Diagnostic Radiography. The subsequent, more recent period of secondment proved to be more challenging due to a reduced weekly commitment (0.4 WTE compared to 0.6 WTE) and within a domain unfamiliar to me: training, education, and career pathways across all Healthcare Sciences. This task necessitated a review of the existing Education and Training provisions for Healthcare Science professions in Wales, to identify what is functioning effectively, what issues are present, and where gaps exist in the current provision. It is important to note that radiographers have been encompassed within healthcare science policy by the Welsh Government since the early 2000s. Consequently, in Wales, we adopt the broader term "healthcare science professionals" to include both radiographers and Operating Department Practitioners (ODPs).

My initial interest in this opportunity stemmed from a desire to gain a deeper understanding of the education commissioning process within a political context and to explore the breadth of Healthcare Science divisions and specialties. I believe my diverse skills, knowledge, and fresh perspective are valuable in evaluating this complex workforce. I also aimed to demonstrate the transferability of my research skills – such as

trend analysis, data interpretation, stakeholder engagement, evidence-based decision-making, and systematic writing – which have been critical in delivering both secondment projects. Alongside these skills comes deeper knowledge, including ethical considerations, information governance, and a broader conceptual understanding of innovation and policy – knowledge that underpins professionalism, strategic thinking, and service improvement.

However, the transferability of research and innovation skills is often overlooked and undervalued in healthcare, despite their intrinsic links to staff well-being, organisational culture, and innovation capacity. Measuring these impacts remains challenging, and current frameworks, including those used by Health and Care Research Wales, tend to prioritise economic metrics over holistic approaches. Evidence highlights this gap: Hanbury et al. (2025) show the benefits of staff involvement in applied research for well-being and professional growth, while Ward et al. (2023) advocate for a more comprehensive Research Impact Assessment Framework. Adopting such models could help capture the true value of research engagement – not only economically but in building resilient, innovative healthcare systems. This is an area that would benefit from further exploration to evidence the indirect research benefits which might aid in progressing that culture that values research and innovation (Figure 2)

> **"I believe my diverse skills, knowledge, and fresh perspective are valuable in evaluating this complex workforce"**

New people

Engaging in a secondment within the Health Education and Improvement Wales (HEIW) healthcare science programme in Wales, particularly in the domain of education commissioning, has been an enlightening experience, both professionally and personally. As a diagnostic radiographer, I have consistently collaborated closely with clinical teams; however, this role has introduced a new dimension of strategic thinking, policy development, and interdisciplinary collaboration. One of the most fulfilling aspects of this secondment was the opportunity to interact with and learn from a diverse array of professionals. Engaging with colleagues from various healthcare science disciplines, educational institutions, and commissioning bodies has broadened my comprehension of the system as a whole. These interactions have challenged my assumptions, stimulated the development of new ideas, and enabled me to perceive the broader context of how education and workforce planning intersect with service delivery and innovation.

Figure 1 – Whether within an NHS service or a training and education programme, research must not be regarded as merely the 'icing on the cake'; it is an essential component that constitutes the fundamental structure.

New ways of working

I have particularly appreciated the opportunity to engage with diverse perspectives, whether from clinical scientists advocating for more structured career pathways or education leaders navigating the complexities of funding and curriculum design. These discussions have heightened my appreciation for the shared challenges encountered across professions and the innovative approaches employed to address them.

Learning from others has also facilitated reflection on my own practice. I have gained valuable insights into the place of radiography within the broader healthcare science landscape. I now realise the extent of my prior knowledge gaps regarding healthcare science disciplines and their respective roles; this new understanding enables me to more effectively articulate my contributions to research and innovation. Moreover, it has inspired a more strategic approach to supporting the next generation of healthcare scientists and to ensuring that education commissioning responds adequately to the evolving needs of services.

Ultimately, this secondment has underscored the significance of stepping beyond conventional professional boundaries. The relationships cultivated, the knowledge acquired, and the confidence built will persist in shaping my work well beyond the duration of this secondment. It serves as a reminder that growth often occurs at the intersections, where disciplines converge, ideas are exchanged, and new collaborations are initiated.

Politics and silos

My part-time secondment project was mainly task-driven, with a strong focus on delivering tangible results through systematic data collection and formal stakeholder engagement. The aim was to achieve defined objectives efficiently with an inclusive, all-Wales engagement process to ensure decisions were guided by broad stakeholder consensus rather than the loudest voices or most visible professions. In theory, this model supports fairness and transparency. However, in practice, I have come to understand the complexity of securing genuinely representative stakeholder engagement. Despite formal consultation procedures, some staff groups and specialities consistently participate more than others. This disparity is not necessarily due to fewer challenges in underrepresented areas, but more likely a sign of limited capacity. Many professionals simply lack the time or mental space to reflect and contribute meaningfully to strategic national initiatives, especially in the context of ongoing workforce shortages and service pressures. This prompts important questions about whose voices are heard and whose are not, and why, when influencing national priorities.

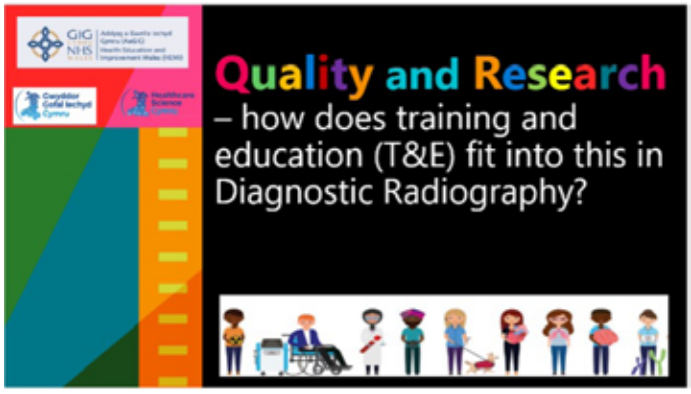


*Figure 2a (left) – Jenna Tugwell-Allsup presenting at the All-Wales Healthcare Science Conference held in Llandudno in 2025; **Figure 2b (above)** the presentation delivered at this conference.*

Another challenge I face, particularly given my background as a researcher, is driven by curiosity and the aspiration to generate new knowledge that can lead to meaningful change. However, I have observed that the nature of short-term secondments tends to focus more on synthesising existing data and perspectives rather than providing new insights or recommendations. Although this critical analysis may facilitate the development of potential solutions, recommending and prioritising these solutions is not always an expected or required aspect of a secondee's role. I have found it challenging to refrain from drawing my own conclusions or offering personal reflections – an instinctive tendency for me. While I was never explicitly told to hold back, I felt the nature of high-level reporting leaves little room for personal insight. This experience has additionally underscored the distinction between academic inquiry and the more politically nuanced environment of professional strategy. In research, there is encouragement to explore confounding factors, question assumptions, and propose new directions. Conversely, strategic work often necessitates careful navigation of organisational sensitivities, timing considerations, and consensus-building efforts. This requires a different kind of rigour, one that demands diplomacy, patience, and a comprehensive understanding of the context.

> **"I have also come to recognise the significance of humility and courage"**

I have also come to recognise the significance of humility and courage. It is easy to perceive oneself as a minor component within a complex system, yet every contribution holds value. Inquiring about the "obvious" questions, particularly in meetings characterised by technical jargon and high-level discussions, can serve as a meaningful gesture. I have realised that many individuals share similar experiences; therefore, do not hesitate to voice your questions. Misunderstandings frequently arise not from a lack of knowledge, but due to the varying languages spoken by different organisations and professions.

Taking it back: Impact on substantive post

Transitioning back into a substantive role following a secondment has been a crucial milestone in my leadership development. Both secondments provided a distinct opportunity to acquire new skills and gain broader insights, experiences that have considerably influenced my confidence and leadership approach. Upon returning to my primary responsibilities, I acknowledge the significance of having the autonomy and support necessary to implement these new perspectives and contribute effectively to service enhancement.

Leadership encompasses not only personal growth but also the ability to create impact, which can only be achieved in an environment that permits the integration of innovative ideas and methods. If this environment is absent, there is a potential risk of losing the valuable learning and momentum gained during the secondment. Therefore, it is vital that substantive roles are sufficiently flexible and receptive to harness and sustain the leadership development that secondments aim to cultivate. For me, this means applying my new knowledge to create meaningful impact. As the newly appointed Chair of the R&I Healthcare Science Sub-Group at Betsi Cadwaladr University Health Board, I aim to turn insight into action – aligning strategy with practice and fostering a culture where innovation thrives. After all, true leadership isn't about being loud; it's about being aligned.

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REIMAGINING LEADERSHIP, INNOVATION AND QUALITY IN THE SCIENTIST TRAINING PROGRAMME

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During our curriculum review at Aston University, conducted concurrently with the national Scientist Training Programme (STP) review, we acknowledged the significance of establishing a dedicated master's-level module on Leadership, Innovation, and Quality. Although elements of these subjects had been previously incorporated into the Year 1 Introduction to Healthcare and Professional Practice module, there was no distinct module exclusively focused on them. To address this gap, we developed a new standalone module, positioning it in Year 3, as our observation indicated that trainees engage with these concepts more profoundly after acquiring substantial workplace experience. This modification signifies a paradigm shift in the timing and manner of introducing these critical skills to trainees, thereby ensuring coherence with the STP curriculum and the practical demands of professional practice.

> **"Leadership, innovation, and quality improvement constitute essential elements within healthcare science practice"**

Why Leadership, Innovation, and Quality Matter

Leadership, innovation, and quality improvement constitute essential elements within healthcare science practice. Healthcare scientists assume pivotal roles in service delivery, frequently collaborating across disciplines to introduce novel technologies, optimise care pathways, and enhance patient outcomes. The STP curriculum explicitly incorporates these themes, emphasising the necessity for trainees to cultivate the ability to lead and facilitate change, elevate service quality, and contribute to innovation. Although many of these competencies are acquired progressively through workplace experience, their integration into a structured academic framework enables trainees to acknowledge their significance at an earlier stage and to acquire practical tools and frameworks.

Historically, these topics were dispersed throughout a broader Year 1 module, thereby restricting opportunities for targeted exploration. We observed that trainees encountered

difficulties in effectively applying leadership and quality improvement concepts without sufficient clinical experience to contextualise them. By relocating the module to Year 3, trainees approach the subject with a more comprehensive understanding of clinical environments, team dynamics, and organisational challenges. This adjustment promotes more engaging discussions, deeper reflection, and stronger integration of theory and practice. Furthermore, it ensures that the assessment components exert a more extensive influence on scientific services.

Assessment through Practical Application

Assessment for the module promotes hands-on application and collaborative efforts through a portfolio framework, which consists of three principal components.

1 Group presentation on a quality improvement process: This promotes teamwork, stimulates problem-solving, and enables trainees to apply improvement methodologies to real or simulated clinical challenges. Recent projects have encompassed implementing peer-review processes, establishing journal clubs, and facilitating transitions from paper-based to digital systems. These initiatives exemplify the diversity of specialisms represented by trainees, who originate from audiology, neurophysiology, and ophthalmic and vision science backgrounds, and frequently collaborate within interprofessional teams.

2 Drafting a business case: Students frequently select to propose employing a new staff member or equipment. They are subsequently tasked with developing a clear and compelling business case, assessing various options, identifying key stakeholders, and analysing the return on investment. Sustainability within the NHS is an essential consideration, encouraging a long-term perspective beyond immediate costs.

3 Individual presentation on leadership: This promotes reflection on personal leadership style, comprehension of leadership theories, and analysis of real-world cases where leadership either succeeded or failed. Students are also encouraged to consider their individual learning needs and Continuing Professional Development (CPD), thereby supporting their Strategic Thinking and Planning competencies. Furthermore, they are invited to contemplate the concepts of leadership and followership and how they would engage others to facilitate change.

This varied approach helps build diverse skills and encourages hands-on learning alongside thoughtful evaluation.

Learning Through Blended Methods

To accommodate the diverse needs of trainees and the demands of clinical placements, the module employs a blended learning approach that integrates online content with face-to-face instruction. Online materials encompass fundamental theories and frameworks in leadership, innovation, and quality, thereby enabling trainees to engage in flexible study and adequately prepare for in-person sessions. These sessions emphasise interactive learning through group work, case studies, and discussions.

Key contributors enhance the learning experience by leading focused sessions, including:

- A Head of Service conducting a practical workshop on developing business cases, guiding trainees in crafting persuasive elevator pitches.
- A clinical quality and accreditation lead examines the practical implications of quality, its influence on workforce culture, and its role in service development. The session presents key frameworks, including the Improving Quality in Physiological Services (IQIPS) standards.
- An experienced leadership academic lead who presents established leadership models, encourages trainees to explore their own leadership approaches and supports critical analysis of real-life cases where leadership has succeeded or failed.

> **“These sessions bring real-world expertise into the classroom, helping students see the relevance of academic concepts in everyday healthcare settings”**

These sessions bring real-world expertise into the classroom, helping students see the relevance of academic concepts in everyday healthcare settings.

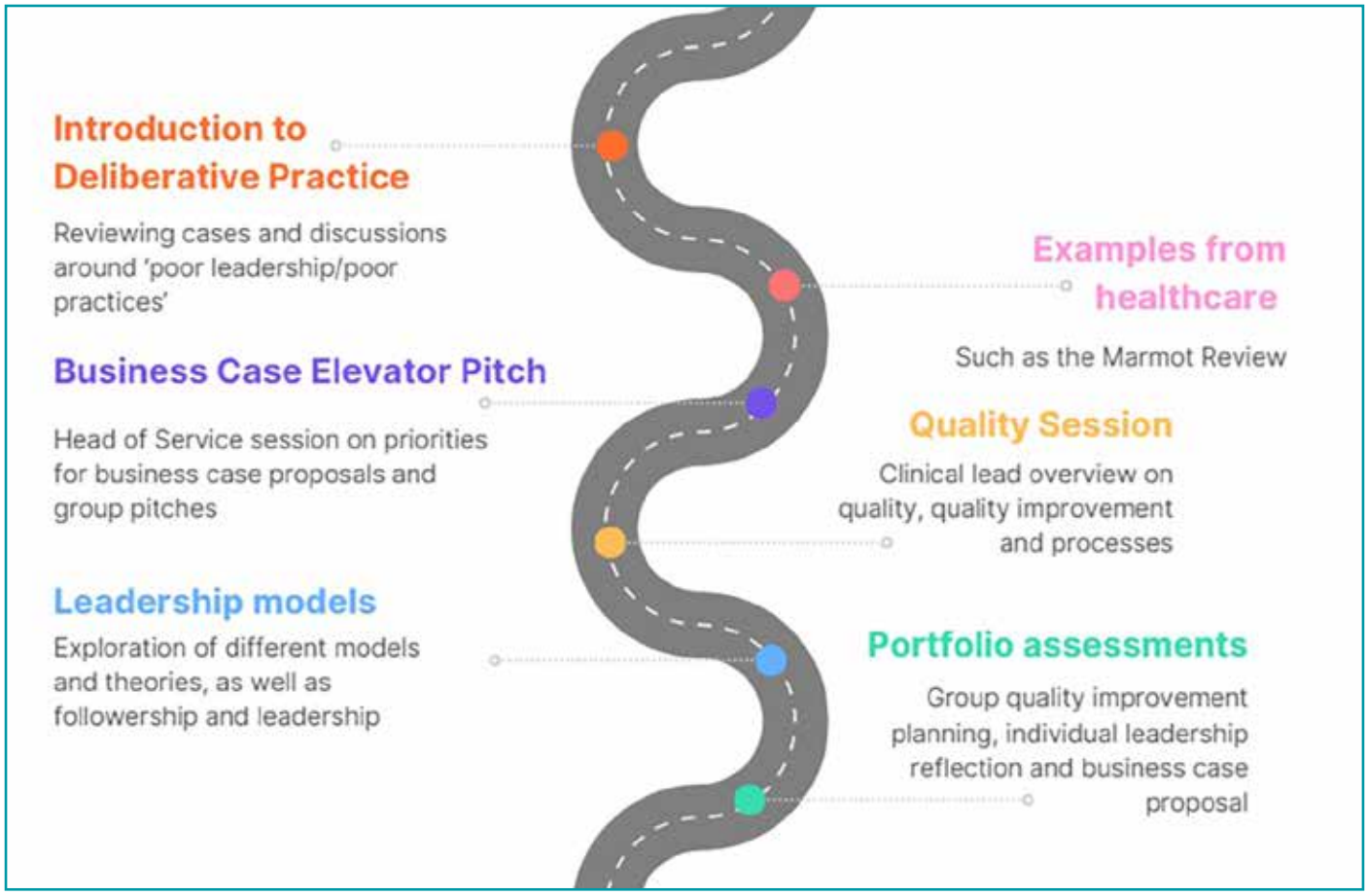
Interprofessional Collaboration

Our cohort comprises trainees from various healthcare science disciplines, including audiology, neurophysiology, and ophthalmic and vision science. The module diligently promotes interprofessional collaboration, mirroring the multidisciplinary nature of their responsibilities within the patient pathway. Engaging in group presentations and quality improvement initiatives enables trainees to gain insights from diverse perspectives and understand how cross-disciplinary collaboration fosters service enhancement. This approach simulates the collaborative environments they will encounter throughout their professional careers.

Developing Leadership Potential

In addition to gaining theoretical knowledge, the module promotes personal development by encouraging trainees to contemplate their professional identity and leadership capabilities. Participants are guided to consider questions such as how they effect change within their current roles, their inherent leadership styles, and lessons derived from observed leadership failures. Engaging in reflective practices of this nature enhances self-awareness, adaptability, and critical thinking, all of which are vital for effective leadership across various healthcare roles.

Figure 1: Roadmap of module key components (developed using Canva)



Real-World Impact and Feedback

Feedback from trainees has been favourable; trainees indicate that the process of developing business cases has provided them with insights into organisational decision-making, emphasising the importance of balancing clinical benefits, costs, and sustainability. Collaboration on quality improvement projects has underscored the complexities associated with implementing change, including stakeholder engagement, overcoming barriers to 'buy-in', and outcome measurement.

> *"I really enjoyed the group project – although a challenge as I didn't have experience in leading (or even contributing to) QI projects at work, it was a great exercise in how to work with people with different experiences and expertise to identify issues in the workplace and examine potential solutions to them. By carrying out the QI assignment, I now feel more confident to address quality improvement in my working life – and have since gone to speak to the CEO of my Trust about some of these issues at a drop-in session!" (Student Feedback)*

Importantly, several students have presented their quality improvement projects within their NHS trusts, with some initiatives being adopted or piloted locally. This direct translation of learning into practice demonstrates the module's success in equipping trainees to lead meaningful improvements.

STP trainees are expected to support the future of the healthcare workforce, with some gaining opportunities to engage in leadership or service-level roles during their training. These elements better prepare trainees for their transition to postgraduate roles. The skills developed through this module ensure that they can confidently contribute to service improvement, engage with innovation, and demonstrate leadership regardless of job title.

The healthcare science workforce faces ongoing challenges, including rapid technological advances and evolving service models. Equipping trainees with leadership, innovation, and quality-improvement capabilities is essential to meeting these demands and supporting patient-centred care. Embedding these skills within the STP reflects their growing importance and ensures that future healthcare scientists are not only experts in their fields but also capable of shaping the services in which they work.

This repositioned and redesigned module represents a significant advancement in preparing healthcare scientists for the realities of modern practice (See figure 1). By integrating leadership, innovation, and quality within a practical, workplace-aligned framework, we are supporting trainees to become proactive, reflective professionals who will help drive the future of healthcare science.

IT SHOULDN'T HAPPEN TO A PHD STUDENT: HOW TO THRIVE, NOT JUST SURVIVE, DURING PHD

IF YOU ASK ANY PERSON ON THE STREET WHAT A HEALTHCARE SCIENTIST DOES IN THEIR DAY JOB, THEY WILL ALMOST ALWAYS SAY 'RESEARCH TO MAKE US BETTER'.

It often makes me sad, therefore, when I speak to Healthcare Scientists in my own travels around the country and they tell me that they don't really think of themselves as researchers, or even of being research active. Whereas I see them as brilliant scientists doing research as part of their daily work to give patients better outcomes.

To me, so much of that response is rooted in only thinking of research taking place in academic settings rather than the places where we do our work. It reflects the frustration of not having access to the final stages of how data is interpreted, despite us being so involved in the data creation. And, it highlights a lack of embedded support in the skills needed to take the next steps in research, such as writing conference abstracts, preparing papers, and sometimes even giving presentations.

Out of these discussions, and my own experiences of being a solo PhD student and then Clinical Academic within a microbiology department, this book was born. The structure of the book focuses on the journey of a PhD student, from thinking about a PhD to undertaking a viva, but so much of it covers subject areas that will help Healthcare Scientists because we do research every day in our work, we just badge it differently.

Topics include:

- How to develop your elevator pitch
- Help for attending your first conference
- Developing confidence in public speaking
- Establishing a project plan
- How to write your first scientific paper

As the song goes 'I get by with a little help from my friends' and I hope this book can act as a friendly guide to support everyone in taking the next steps in their research journey, whether through a formal programme like a PhD, or as part of their professional development to enhance their Healthcare Scientist role, expand their interests, and improve patient outcomes by embedding the latest techniques. It really is a win-win!

Professor Elaine Cloutman-Green

AWARDS AND RECOGNITIONS

We are pleased to present another collection of recent awards and honours in healthcare science. It showcases individuals who have been recognised for their exceptional contributions to the profession and the patients they help. Sharing these achievements spotlights and records the remarkable achievements within our profession of healthcare science. We acknowledge that this list is not comprehensive, and we congratulate all healthcare scientists who received awards and recognition in 2025.

Key recognised individuals and their respective awards include:

- Peter Bill MBE, Consultant Clinical Scientist and Head of Neurophysiology at Birmingham Women's and Children's NHS Foundation Trust, was awarded an MBE by His Majesty the King in recognition of his dedicated work in advancing the field of Neurophysiology and Healthcare Science.
- John Ian Davies MBE, Associate Professor of Biomedical Science practice at the University of Staffordshire, who has been awarded an MBE for services to the NHS diagnostic pathology service and to Biomedical Science education.
- Professor Caroline Ogilvie OBE, Lately Consultant Clinical Scientist in Genetics, South East Genomics Laboratory Hub, Guy's and St Thomas' NHS Foundation Trust. For services to Patients with Genetic Disorders (London, Greater London)
- Andrea Johnson FIBMS, Wye Valley NHS Trust who received the Biomedical Science Leader award at the IBMS Awards.
- Dr Guy Orchard FIBMS, St John's Dermatopathology Laboratory, Synnovis Analytics, who was highly commended for the Biomedical Science Leader at the IBMS Awards.
- Craig Baker FIBMS, Cellular pathology and mortuary service manager at Hywel Dda University Health Board, who has been honoured as the Biomedical Scientist of the Year 2025 at the Advancing Healthcare Awards UK 2025.
- Laura Jess, Head of Paediatric Respiratory and Sleep Physiology at NHS Lothian, has been awarded the Healthcare Scientist of the Year at the 2025 Scotland's Chief Scientific Officer's Healthcare Science Awards in recognition of her transformational leadership in healthcare science.
- Dr Ruth Brotherstone, lead physiologist in the neurophysiology department at NHS Lothian, was one of four shortlisted finalists in Scotland, nominated for Healthcare Scientist of the Year at the Scotland's Chief Scientific Officer's Healthcare Science Awards 2025
- Emma-Jane Simpson, the recipient of the Rising Star Award at the Advancing Healthcare Awards Northern Ireland 2025. Emma-Jane was nominated for her exceptional leadership and vision as an active ARTP workforce Committee member, revitalising respiratory and sleep science networks in Northern Ireland and driving meaningful workforce development across the profession.
- Monica Martins, Clinical Team Lead in Nuclear Medicine, and the Bone Densitometry (DXA) Non-Medical Reporting Team, Swansea Bay University Health Board, was the overall winner at Advancing Healthcare Awards Cymru 2025 for "Building Capacity and Consistency: Developing a Non-Medical Bone Densitometry (DXA) Reporting Workforce"

This list of achievements highlights the essential role healthcare scientists have in improving patient care, fostering innovation, and shaping the future of the NHS. Despite these important contributions, their efforts frequently remain unrecognised.

Nominating colleagues for honours such as the King's Honours presents as a powerful mechanism to celebrate their impact and elevate the profile of healthcare science. Individuals are encouraged to highlight their own or their colleagues' recent achievements or awards for potential inclusion in upcoming editions of the Healthcare Science Leadership Journal by contacting leadershipjournal@ahcs.ac.uk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