THE HEALTHCARE SCIENCE LEADERSHIP JOURNAL

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Editorial Board

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In this issue

Articles are grouped by topic and are not in page order

AHCS Academy for Healthcare Science

EDITORIAL

Every change has its own path and moves to its own rhythm. Effective leaders look for the best way and time to influence its direction and outcome, whether that change be in organisations, technologies, ideas or individual careers.

NHS England is changing, by devolving significant responsibility to newly-created Integrated Care Systems (ICSs). **Jonathan Flannery** outlines their function and describes his experiences as a newly-appointed ICS lead healthcare scientist seeking recognition for healthcare science in Dorset. He gives advice helpful to those interested in taking up system-wide roles.

Adoption.of lead healthcare scientist posts by individual ICSs has been patchy. **Zoe Clarke** and colleagues introduce a Community of Practice aimed at encouraging and empowering existing and future lead healthcare scientists to gain influence and achieve change at local level. Contact details are given at the end of the article.

How do you lead effectively through rapid technological change? **Julia van Campen** looks at two leadership models as applied to genomics, one of many disciplines where inspirational claims can excite participants and observers but also run the risk of creating unfilled expectations. Each model offers insights to leaders in this and other technologies on how to remain grounded.

Individuals also go through multiple opportunities for change and growth. **Bamidele Farinre** narrates her career journey to date, unpacking some of the challenges she has faced and lessons she has learnt. These include combatting a lack of support for black women in science and contributing to healthcare science as a role model, STEM ambassador and diversity champion.

Another opportunity open to healthcare scientists is to participate in research. **Emilee Gosnell** describes her excitement about applying for and obtaining a pre-doctoral research fellowship whilst continuing in clinical audiology practice. This has led to her personal and professional growth and the opportunity to grow her involvement in research.

Change involves making choices, and what we choose to do is guided by our underlying values. **Samantha Lear's** passion to make a positive difference has drawn her into senior roles in a professional body and her fascinating career story contains many insights. Completing Higher Specialist Scientist Training helped her understand her own approach to leadership and has reinforced her desire to grow the consultant clinical scientist role in audiology. She has been involved in two national reviews of paediatric audiology services, and **John Day** and **Adrian Carragher** also reflect on their involvement in the Scottish review team and lessons they learned in the process. They all agree that implementing its recommendations is essential to providing the foundation for an improved and improving service.

Sometimes opportunities come up unexpectedly but reach us when we are ready to change. **Paisley Hall** heard about an opening to use her cardiac physiology and leadership skills to realise a long-held dream to contribute to charitable work, helping to recycle used but viable pacemakers from the UK to health services overseas. She has travelled to Nigeria and is working to set up links to a hospital in India.

A new feature in this issue is a section presenting ideas for service improvement. **Shahid Muhammed** shows that analysing patient discussions on social media support groups can identify topics where further information and professional intervention would be helpful. This can guide the production of educational material and help to counter online misinformation.

Keith Ison

A NERVOUS SYSTEM LEADER

REFLECTIONS OF A NEUROPHYSIOLOGIST IN THE INTEGRATED CARE SYSTEM

The 'Our Dorset' Integrated Care System (ICS) advertised the position of Lead Healthcare Scientist. I applied with some excitement and trepidation. I had some experience with developing the Healthcare Science (HCS) network in our trust, so applying for an ICS role seemed the next logical step. I thought this role would be an excellent opportunity to develop and demonstrate my leadership skills in a broader context.

Jonathan Flannery *is a Clinical Scientist within Neurophysiology. He sits on the Association of Neurophysiological Scientists Council, and is Honorary Editor of its Journal.*

What is an ICS and why does it need HCS representation?

'Integrated care systems (ICSs) are partnerships of organisations that come together to plan and deliver joined up health and care services, and to improve the lives of people who live and work in their area'[1]. There are 42 across England. Each one is also responsible for ensuring that their population benefits from innovation. Delivering this agenda requires wide-ranging 'systems level thinking', especially when talking about future developments and strategy across a whole ICS.

Each ICS has an Integrated Care Board (ICB). This is a 'statutory NHS organisation responsible for developing a plan for meeting the health needs of the population, managing the NHS budget and arranging for the provision of health services in the ICS area.' The Board directs the ICS. ICBs must have a Chief Medical Officer and Chief Nursing Officer but there is no statutory healthcare scientist appointment.

The first purpose of ICSs is 'to bring partner organisations together to improve outcomes in population health and healthcare'. Healthcare scientists are crucial in enabling this. Their work underpins all aspects of the NHS and its recovery programme, including dealing with waiting list backlogs and delivering innovation. Medical care relies significantly on contributions from healthcare scientists. An ICS without HCS representation is therefore hamstrung before it begins.

> "Getting heard requires having a clear voice"

Getting heard

Our Dorset ICS has a vision of embedding 'Clinical Care Professional Leadership' to give every profession a voice[2,3]. This ICS now has strong Life Sciences representation, with a pathology hub under construction. Other HCS teams are mobilising already. Why do they need to work quickly?

Getting heard requires having a clear voice. Medical and nursing groups already have both numbers and influence. Trust leaders actively seek out and listen to them. To have a similar impact, healthcare scientists from previously disparate departments have to work together on representing each other and putting forward a shared agenda.

My trust is University Hospitals Dorset. It has a history of collaboration across HCS going back to 2015 when I started a HCS forum on the Poole site. We welcomed in colleagues from Bournemouth when our two trusts merged. We learned from the Allied Health Professions (AHPs) how to influence and engage the trust board. An Associate Director was appointed for AHP and HCS groups and has proved an exceptional ally. The nascent ICS already had an AHP faculty and I suggested they would need a HCS Faculty too. This was promptly formed by our Associate Director and with their on-going support and that of the Regional Lead Healthcare Scientist the role of Lead Healthcare Scientist for One Dorset ICS was advertised. I thought I should apply.

Development opportunities

There will be many healthcare scientists like me across the country who want to develop their careers but feel their progress has stalled. Some will want to develop their skills

and seek a managerial post, but that is not for everyone. Others may look at a Clinical Academic career. A third path is to develop leadership skills outside your speciality but still within the realms of HCS. Courses run by the Academy for HCS and others can help prepare individuals for such leadership roles including those run by the Faculty of Medical Leadership and Management[4], Women in Science and Engineering[5] and courses from the NHS Leadership Academy[6].

Look to your local HCS networks for secondment opportunities. These networks will need continuing support to develop as their input and influence is needed not just for the ICS but also at regional level. Figure 1 demonstrates the net of interconnections across Dorset and beyond, showing some of the opportunities for healthcare scientists to participate and lead. These include Regional professional network leads, multi-disciplinary leads at ICS level and involvement at individual trusts. Networks and communities of practice are essential for connecting individuals, identifying problems and sharing solutions. Just like neural pathways, networks that fire together will wire together!

> **“Just like neural pathways, networks that fire together will wire together!”**

Being a lead healthcare scientist in an ICS

My role came with a seat round a table of ICS Clinical Directors, Workforce Directors, and Strategy Development teams. To start with I did not really understand their roles. It was intimidating. However, my light bulb moment was realising that they were looking at me similarly and that I was the expert in the room for HCS.

An important early learning point was that strategy and development meetings had already been held without a healthcare scientist present. I asked what decisions had taken place without HCS input and the answer was, of course, all of them! Whenever I attend meetings now I often ask out loud: “Who is not represented today? How do we ensure their input and involvement?”

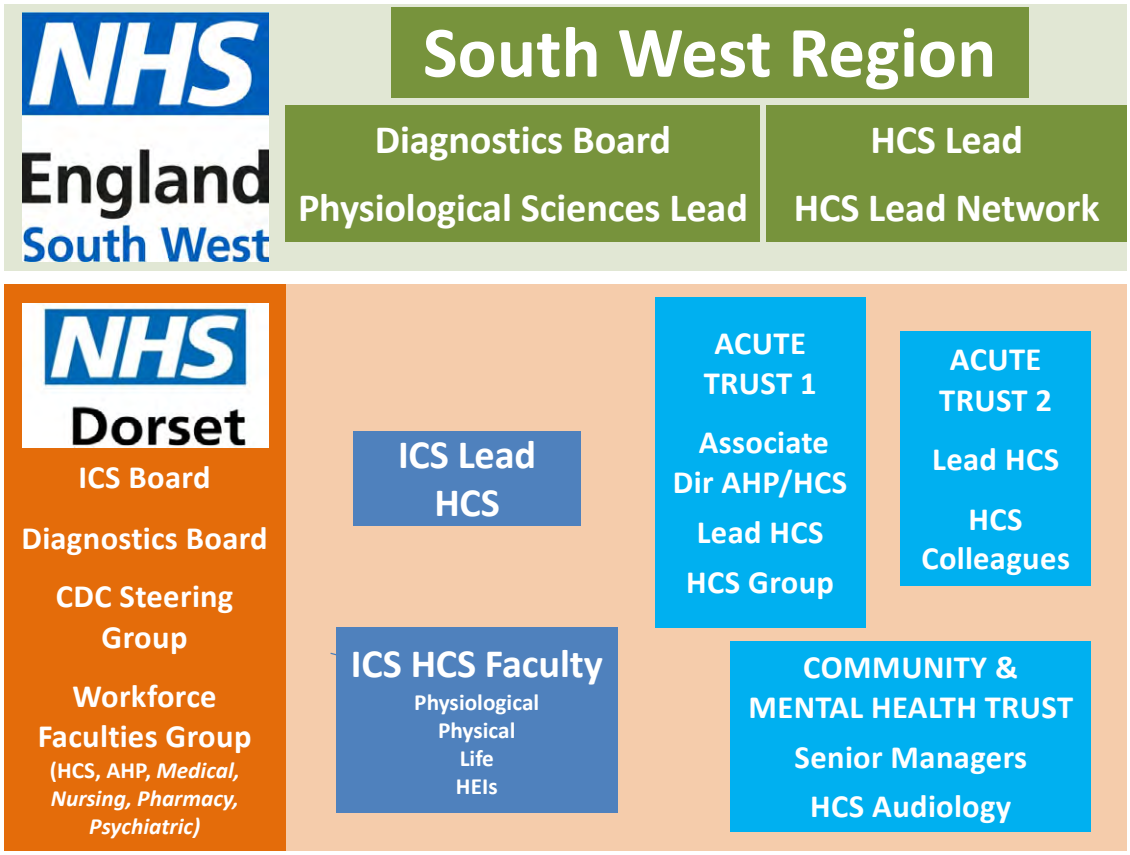

Figure 1 *Slide demonstrating the elements linked to create a HCS network within the Dorset ICS, spreading to the South West region and beyond*

I also needed to speak up. If ICS colleagues did not know about HCS, how could they know who to invite to the table? I introduced the many HCS professions to the ICB and briefly raised eyebrows when I pointed out that the waiting list activity collection tool DM01[7], whilst very important, did not capture all relevant HCS activities. There were several unseen waiting lists. Also of interest were that several HCS specialisms rely on voluntary staff registration, and that unlike pathology labs or imaging services some areas are not required to have accreditation.

I listened carefully to terminology and phrases I had never heard before. Expressions such as "improving with purpose" or "large co-designed collaborative events, co-delivered by experts with experience" made my scientific mind ache. Thankfully I had colleagues ready to help and interpret. Events within the ICS generally involve complex issues and so progress more slowly than I am used to from my clinical work. Developing a HCS workforce strategy for example requires talking to department leads, heads of service and trust education leads, amongst others. A lot of work goes on behind the scenes. Sometimes there is a sudden flurry of activity when funding appears that needs to be spent urgently. This has involved me in some occasional evening and weekend work. One plea to all department leads is to prepare for unexpected windfalls, either for training or equipment, and to have several plans ready to put into action at short notice.

HCS at Regional level

The South West Region is building and garnering support for multiple HCS networks: ICS HCS leads, Trust lead healthcare scientists and Regional HCS practice educators. It is difficult for one person to represent every HCS discipline within an ICS but someone in the wider multi-professional network is always ready to provide support. Funding for these roles is essential for them to be effective. Goodwill alone is not enough. Everyone associated with HCS, especially at the most senior levels, must continue to demonstrate support for colleagues in network roles.

A challenge

If you accept the challenge of a role in system leadership you will be amongst colleagues with the drive, energy and determination to make a positive change. I have found healthcare scientists to be willing to share experiences and give peer support. System wide roles are a challenge but not one you have to face in isolation. You will find allies across the region, within in your ICS and within your trust. Looking further afield you can seek support from mentors at the NHS Leadership Academy.

For a long time healthcare scientists have found doors to knock at, only to be let through and find no seat at the table. I think things are changing. Doors are opening and healthcare scientists are being welcomed through and supported. Have a good word with the imposter inside yourself, and take that first step.

Jon recently received the University Hospitals Dorset Partnership Working award during HCS Week for his work across the ICS.

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ORGANISATIONAL LEAD HEALTHCARE SCIENTIST COMMUNITY OF PRACTICE

Healthcare scientists have often been overlooked. In England, considerable work was undertaken in the early 2000s under the Modernising Scientific Careers initiative to harmonise training routes and professional qualifications across all Healthcare Science (HCS) specialties. Zoe Clarke asks what else can be done to raise the profile of this hidden professional workforce and realise its leadership potential?

Zoë Clarke *is Lead Healthcare Scientist at Barnsley Hospital NHS Foundation Trust and Environmental Control Service Lead in the Assistive Technology Team.*

Lead Healthcare Scientist roles

Leadership was a key element of the 2016 NHS Five Year Forward View. In response Professor Dame Sue Hill, the Chief Scientific Officer (CSO) for England, promoted the contribution of healthcare scientists to NHS leadership and launched the concept of an organisational lead healthcare scientist[1]. This initiative recognised the need to raise the profile of healthcare scientists within trusts and put Healthcare Science on an equal footing with other clinical groups such as Medical, Nursing and Allied Health Professions. A call to action was sent to Medical Directors asking them to set up and appoint to a lead healthcare scientist role. This call is still active and the associated role descriptor was updated in 2021.

Many but not all trusts have appointed lead healthcare scientists. Unfortunately the CSO's proposal was not mandated by NHS England. Instead it has been adopted in a variety of ways to reflect local circumstances. Trusts fall into one of three general categories:

- Those with a paid role for a lead healthcare scientist.
- Trusts with a named lead who fulfils the role on top of their existing job.
- Ones where there is no identified lead but one or more individuals attend relevant meetings and liaise with healthcare scientist colleagues. This is usually done as an extra and not considered part of anyone's job.

Reasons for not having a Healthcare Science lead are nuanced and include:

- The organisation's Executive team not appreciating the importance of financing such a role, instead seeing HCS as falling under an existing group such as Nursing or Allied Health Professions with no need for a dedicated lead
- Trusts being keen to appoint but receiving no applications. If no-one steps up to take a vacant post, Executive teams may conclude that there is no interest. However healthcare scientists usually want to see these posts filled and may be interested but unable to integrate the duties into their existing role

> **"Jamboards were used to capture information on discussion topics"**

Even where lead healthcare scientists have been appointed, it is often hard to do justice to the role and to fit everything in. Some larger trusts have appointed a deputy to support the lead and improve representation across the wide range of HCS professions.

The impact of Integrated Care Systems

The NHS in England is currently evolving a devolved Regional and Integrated Care System (ICS) structure, with considerable variation in how HCS is represented across the country. The pandemic led to the establishment of Regional leads for Healthcare Science from 2020, throwing a spotlight on many 'hidden' HCS professions including Respiratory Science, Infection Science and Clinical Engineering. Regional leadership has enabled the voice of HCS to be heard at a high level and has facilitated HCS contributions to ongoing NHS developments.

ICSs became statutory bodies in 2022[2]. They have a focus on Clinical and Care Professional Leadership (CCPL)[3], breaking down traditional ideas of leadership structures and professional hierarchies within the NHS. Some ICSs such as South Yorkshire have well established HCS Councils but others are still at an early stage of development.

Setting up a Community of Practice

Organisational lead healthcare scientists have the potential to link up across local networks and in area councils. These meetings tend to focus on Regional or ICS business, often around workforce or Community Diagnostic Centres, with less opportunity to share day to day experiences. The idea of setting up an HCS Community of Practice (CoP) is to bring leads at trust and ICS level together for peer support. The CoP also provides opportunities to share best practice and help aspiring leads learn how to establish appropriate representation and develop influence, especially in the absence of a lead healthcare scientist role at trust or ICS level.

> **"Lead healthcare scientists are busy people, so any meeting or group needs to add value"**

In summary, CoPs can provide:

- Peer support for lead healthcare scientists
- Sharing of best practice
- Opportunities to update on and discuss national initiatives
- Sharing of documentation, particularly around establishing lead roles
- Support for HCS leadership development

What has been done?

The Community of Practice has grown organically. Its initial meeting was scheduled for an hour at lunchtime and was advertised via social media, at regional and national meetings and by word of mouth, with eight weeks' notice. The invitation was not exclusive, recognising the potential to develop leadership at all levels. The topic covered was how to represent the broad range of HCS specialisms. Ninety people registered an interest and 60 attended online. Three lead healthcare scientists talked about their experiences and there was a broad discussion about the challenges of the role. Jamboards[4] were used to capture information on discussion topics and Figures 1 and 2 show examples of these.

Feedback from the first meeting was positive. Future events were requested and also more flexible ways to communicate, leading to the setting up of a CoP FutureNHS page. Attendees felt that an hour was too short and wanted more time in breakout groups to share individual experiences. They also suggested that there would be benefit in aligning the CoP with the Academy of Healthcare Science (AHCS). Discussions were held with the Academy and a contact directory was set up for CoP members. Benefits of this include access to AHCS communications and future support for linking the CoP to other groups and initiatives.

A second meeting was held in March 2023, prior to HCS Week. It included an update on Clinical and Care Professional Leadership from Maria Smith at NHS England and a report from Helen Ross on headcount work being undertaken by the

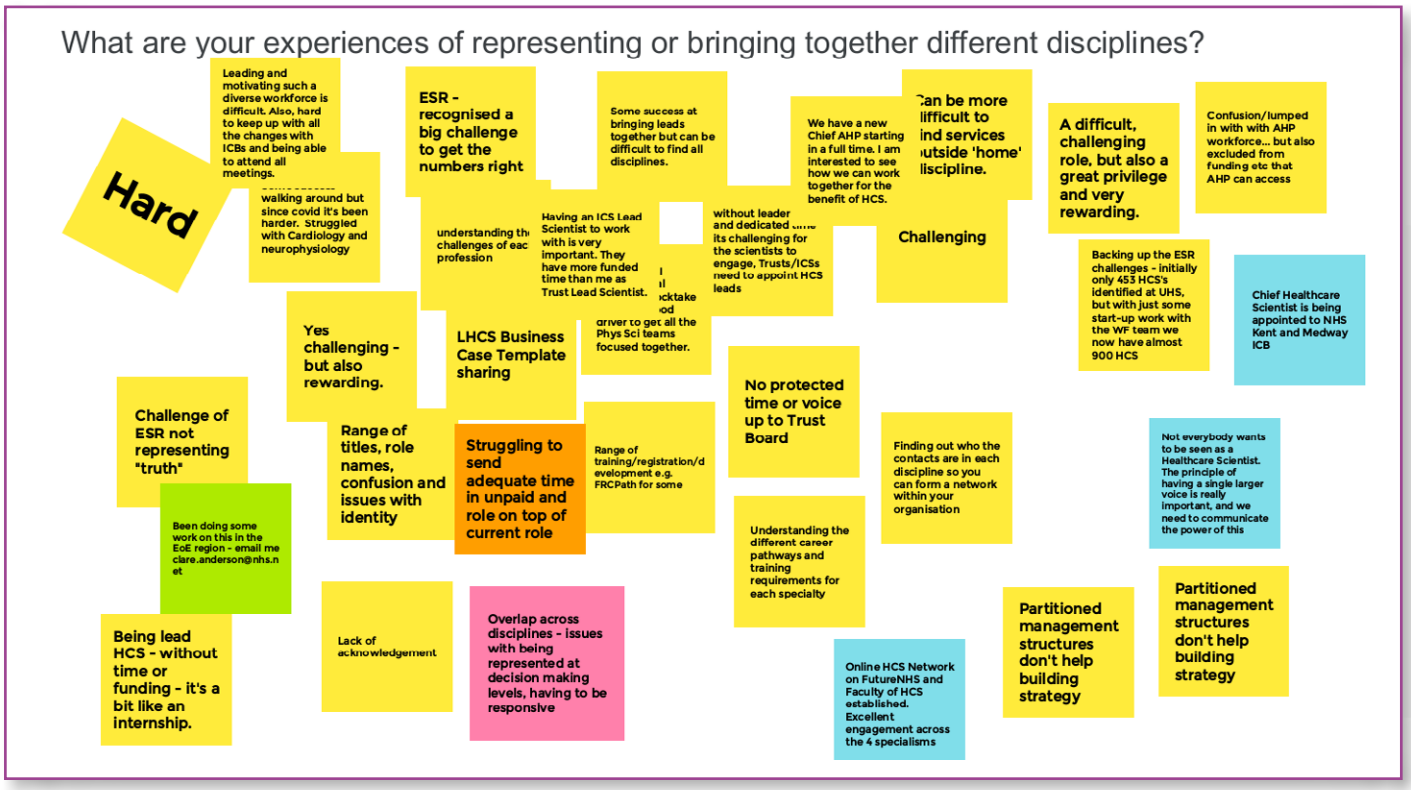

Figure 1 – Example jamboard from meeting

Figure 2 – Jamboard of social media tags for HCS Week

Office of the CSO. Discussions were shared via jamboards and social media accounts during HCS week.

The third meeting comprised short presentations from each Regional HCS lead. These generated discussion about the various workstreams being pursued by different organisations.

Benefits and learning

Lead healthcare scientists are busy people, so any meeting or group needs to add value. Responses to the CoP have been positive in this respect and the AHCS link offers further opportunities to develop. The CoP led directly to HCS representation on a panel at the NHS Confederation looking at Clinical and Care Professional Leadership, alongside an AHP Lead, GP, Director of Social Services, Medical Director and the CEO of an Integrated Care Board. The HCS contribution was well received and a healthcare scientist in the audience expressed how excited she was to see HCS involved at this level.

The CoP has been able to share documentation that supports the development of lead healthcare science roles, via the FutureNHS website. The next planned step with these pages is to put up biographies of CoP members so people can link up outside formal meetings.

The NHS Long Term Workforce Plan[5] was published in 2023 and it is due to be refreshed every two years. It is essential that HCS is represented accurately. The CoP offers an opportunity to support trust lead healthcare scientists in tasks such as reviewing each individual's coding on the Electronic Staff Record and by providing access to material that highlights the reasons for particular initiatives. It is exciting to receive insights and find routes into sources of national and peer support, and helps to show that there is consultation across the HCS workforce.

It is inevitable that the CoP will evolve. It has the potential to support a wide leadership agenda within HCS. Future work could include holding face to face meetings and linking professions with each other to share learning.

If you would like to find out more, please contact Zoë Clarke z.clarke@nhs.net

Zoë Clarke is Lead Healthcare Scientist/Environmental Control Lead at Barnsley Assistive Technology Team. Additional contributions also from: Tendai Mangoma, Senior Biomedical Scientist, Oxford University Foundation Trust; Clare O'Brien, Chief Cardiac Physiologist and Deputy Manager of Cardiology Diagnostics at Medway Foundation Trust; and Emma Walker, Lead Healthcare Scientist, Imperial College Healthcare.

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LEADING NHS GENOMICS THROUGH THE HYPE: CAN TRANSFORMATIONAL LEADERSHIP OR COMPLEXITY LEADERSHIP THEORY PROVIDE ANSWERS?

Julia van Campen looks at leadership in the healthcare science speciality of genomics, a field that has long captured the public's imagination. Its conclusions apply to any situation where innovation is rapid and expectations are high.

Genomics in the UK has undergone a rapid transformation since publication of the 2016 Chief Medical Officer's report, "Generation Genome"[1]. The newly developed NHS Genomic Medicine Service is facing unique challenges, including very rapid innovation and a high level of public and professional expectation as to what can be delivered.

Effective leadership is crucial to organisational success. Looking at leadership through an academic lens provides insights into how well it is working and helps to identify areas for improvement.

Transformational leadership is one model that helps organisations understand and navigate their challenges. It does however contain elements that require caution when applying it to a rapidly developing field, especially one where initial expectations may not be fulfilled. More recent theories look at leadership as an emergent property of complex organisations. Can either theory suggest ways to improve leadership in a situation of rapid change?

Transformational leadership

In this leadership style team members are motivated by a common sense of purpose and inspired by a shared vision. It relies on four elements: inspirational motivation, intellectual stimulation, idealised influence and individualised consideration[2,3]. Theoretical benefits of transformational leadership include providing staff with a sense of purpose; empowering staff through giving them a say in how they do their jobs; and embedding respect for individual contributions[4]. Positive effects that have been observed include increased productivity, higher employee satisfaction and lower stress[4].

This leadership style has its vulnerabilities. Promoting excitement among followers about large transformational changes risks creating unfulfilled expectations. Asking followers to work harder in the interest of a shared vision can reinforce existing 'angels and heroes' narratives around healthcare practitioners[5] and create feelings of emotional manipulation. In a fast moving situation, leaders and team members may lose focus on the overall vision and what constitutes organisational success[6].

Julia van Campen *is a Higher Specialist Scientist Training (HSST) trainee in Genetics working in the Synnovis Analytics Genetics laboratory at Guy's Hospital (London), which is part of the South East Genomic Laboratory Hub. She has interests in the interpretation of variants in rare disease and the development of new diagnostic assays.*

Vision and hype in genomics

Vision is a central component of transformational leadership. In the NHS Genomic Medicine Service, leaders regularly talk about vision[1,7]. Moving case studies that involve life changing diagnoses are used to promote the potential of embedding genomics into healthcare – an example of inspirational motivation[8]. The Service has a strong focus on 'the genomic revolution', a phrase of idealised influence. The strength of this inspiring and emotive picture can however distract politicians, professionals and the public from the need for clinical trials or health economic analysis[9]. The risk of a strong vision smothering debate on the appropriateness of the vision itself has been highlighted before:

> ***"Discussions about whether or not technologies should be implemented into practice (...) are a vital aspect of ethical discussion—and an aspect in desperate need of attention. (...) This might become increasingly difficult in the wake of the Chief Medical Officer's 2016 Report because, by***

driving Generation Genome at such a pace, this Report leaves little room for (...) discussions which may question the appropriateness of genomic technologies within the healthcare system."[10]

Effective leadership requires that followers – in this case, healthcare scientists in the NHS[5] – are developed intellectually and involved in developing the overall vision. Encouraging professional organisations such as the Royal College of Pathologists to provide suitable platforms for professional challenge and debate could aid this. Individualised consideration, another key element of transformational leadership, could be achieved by targeting resources at the particular development needs of each NHS genomics laboratory and their staff.

> **"Research needs a supportive environment in order to flourish"**

Leadership as an emergent property of complex systems

Complexity leadership theory looks at leadership as an emergent property of complex systems. These systems show 'bounded instability' - a certain amount of predictability but no direct relationship between actions and results[11].

Studies of leadership that focus on complexity reject traditional cornerstones of leadership. Top-down leadership is seen as ineffective and the use of management tools to 'tame complexity' as unlikely to work[11]. Instead, three elements are seen as key to good leadership: critical (self-) reflection when learning; bottom-up innovation; and an active internal politics in the organisation[11,12]. These factors support creativity and help organisations adapt to change.

However, if leadership 'just emerges' from a complex system, how do you actively put it into practice? There is little real-life evidence that complexity leadership theory has been applied successfully. In healthcare, it may be particularly difficult because of the need for standardisation and accountability and perceived threats to professional expertise that arise from the theory's emphasis on contingency[13].

Navigating 'bounded instability' in genomics

As genomics navigates hype and potential future disillusionment, the field may experience 'bounded instability'. Complexity theory provides a metaphor for how leadership can arise in this context. Three key lessons are suggested. The first is that when considering errors or inefficiencies, we should critically reflect on local values and context as well as the immediate cause. Such 'double loop learning' can help processes improve more rapidly[12]. Secondly, bottom-up innovation should be encouraged. This is critical to empowering all members of an organisation. Finally, the stimulation of debate and dissonance enables leadership to adapt to unpredictable contextual changes.

Conclusion

Transformational leadership and complexity leadership theory both have strengths and limitations. Transformational leadership theory does not fully capture the complexity of leadership interactions but indicates the importance of keeping followers fully engaged. Complexity leadership theory offers directional insights including how stimulating follower creativity can help organisations adapt in situations of rapid change. Leaders navigating hype and innovation in NHS services can learn valuable lessons from both theories.

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MY CAREER JOURNEY

Bamidele Farinre

Bamidele Farinre describes her career journey and how she has overcome the challenges she faced.

From the beginning

I started my healthcare science journey in 2003 by studying for an HND in Applied Biology at City College Brighton and Hove. I then graduated from Brighton University in 2006 with a BSc in Biomedical Science. While I searched for NHS career opportunities in biomedical science, I gained practical work experience supporting young adults with learning disabilities and volunteering as a youth group leader.

In January 2008 I started in the NHS as a Medical Laboratory Assistant. After 18 months I was offered a trainee biomedical scientist post in the Microbiology and Virology department of Great Ormond Street Hospital and over the following years underwent intensive training. I completed my Specialist portfolio in Virology, an MSc in Clinical Microbiology at Queen Mary College, University of London, and the Institute of Biomedical Science (IBMS) Higher Specialist Diploma in Virology. I continue to hone my scientific and leadership skills and have progressed steadily to become a Health and Care Professions Council (HCPC) registered and Chartered scientist, and a senior specialist in my field.

What else have I achieved?

Looking back over more than a decade, I am proud of my achievements.

In 2019, I was awarded the 'Champion of Biomedical Science' Award for the IBMS London Region, was a finalist for *The Pathologist*'s 'Trailblazers' Power List' as well as the Women in IT 'Excellence Awards Role Model of the Year' category. I was recognized as one of the top advocates for biomedical science by *The Pathologist* magazine. I was also a finalist for the Academy for Healthcare Science's award for inspiring the healthcare science workforce of the future.

During the COVID-19 pandemic, I served as Chief Biomedical Scientific Lead on the Department of Health and Social Care's Mobile Processing Unit Vans project. This project delivered 14 validated vans for training and developing the 100+ biomedical scientists, associate practitioners and medical laboratory assistants required to carry out rapid analysis of Covid-19 swab samples. I also played a significant role in setting up a new COVID testing laboratory[1] and was responsible for ensuring that good laboratory practice and training were implemented throughout.

> **"Many black scientists feel that they are working in an environment that leads them to feel invisible, unsupported and unwelcome"**

My dedication and contribution to my profession have been recognised on many professional platforms. I am honoured to have won the Biomedical Scientist of the Year award, and also to be named as the overall winner, at the UK Advancing Healthcare Awards 2022. In addition, I was named winner of the Science and Engineering category at We Are The City's 'Rising Star Awards' 2022. I am proud to have been elected an Honorary Fellow of the UK Academy of Healthcare Science (AHCS) in August 2022, in recognition of my leadership role.

I have authored several articles for the IBMS, *The Pathologist* Magazine, and *Inspiring the Future*, and have been featured on interactive and educational podcasts to raise the profile of the biomedical science profession. My work was even included in a case study project with a Women in Science and Engineering Campaign[2].

I currently serve as Deputy Chair of the IBMS Virology Specialist Advisory Panel. I am an HCPC Registration assessor and represent IBMS on standards committees. I am a WISE campaign role model for 'My Skills My Life'[3], an 'Inspiring the Future' STEM ambassador[4], an IBMS mentor, a British Science Association Crest award assessor[5], an IBMS CPD officer and mentor, and a Freedom to Speak-Up Ambassador. I am also a school governor.

What particular challenges have I faced?

As a black female scientist, I have experienced discrimination. Studies have consistently shown that this hinders individual and scientific progress, reduces diversity in the pool of clinicians and scientists, and contributes to racial and ethnic health disparities. I strongly support proactive measures to eliminate discrimination and promote equity, in order to create a more effective community where healthcare professionals can excel. Breaking the glass ceiling is a step in the right direction, as my award of Biomedical Scientist of the Year demonstrates.

> **"When life throws a challenge my way, I remind myself to keep pushing forward and never give up because success comes from overcoming adversity"**

Many black scientists feel that they are working in an environment that leads them to feel invisible, unsupported and unwelcome. This is a significant barrier to success and upward mobility. Several of my colleagues have shared experiences of being treated as intellectually inferior, having their work invalidated and being subject to abuses of power. They have felt excluded from or overlooked for opportunities, isolated, viewed as outsiders and even seen as commodities. Such experiences are barriers to the advancement of our black colleagues and to scientific and professional progress.

To eradicate discrimination, senior leaders must be aware of their legal and moral obligations and strive to create an inclusive work environment. Setting out and applying a clear discrimination policy is a step towards promoting an accommodating work environment. Such a policy should define discriminatory behaviours; outline processes for filing, investigating and documenting complaints; and set out what to do following an incident report. Employers can also eliminate conscious and unconscious recruitment bias by changing their hiring processes. It is common for hiring to be biased, most often against candidates with unfamiliar names, gaps in work history or foreign training credentials. One possible solution is blind recruitment, which involves removing names and other identifying information from resumes. Training should also be adapted to accommodate the needs of different workers, including those who lack certain skills but have the potential to be good employees. Tracking diversity performance can help organisations improve their hiring and promotion of women, visible minorities, people with disabilities and indigenous peoples into the workforce and into leadership positions.

Are things changing?

If you are a young black person interested in pursuing a career in science, it is important to recognise your passion and take the steps needed to achieve your goals. However, the process of finding a new role can be frustrating. My advice to young BAME individuals is to believe in yourself and your abilities, strive for excellence, aim high, and do not be afraid to fail. This motto has helped me persevere through difficult situations and rise above obstacles. When life throws a challenge my way, I remind myself to keep pushing forward and never give up because success comes from overcoming adversity.[6]

Society and the scientific professions are becoming more aware of the issues faced by minority groups. Efforts are being made to promote BAME scientists as mentors and role models for young people and aspiring scientists. A lack of visible role models from the BAME community has been identified and work is starting to address this. To encourage a greater diversity of scientists, we must expose students and early career scientists to inspirational role models early in their careers. Seeing a black woman like me win awards from professional organisations has a significant impact on early career scientists. It helps to solidify the decision to pursue their career and demonstrates that such a journey is possible. Presenting diverse role models will enforce the importance of equality and inclusion and quickly invalidate the 'STEM stereotype.' As a STEM advocate and ambassador, I believe that equality and inclusion are vital for progress in science and our wider society.

There is a lack of support for black women in the scientific workplace, which often causes students to turn to other careers. There is still much work to be done to identify and nurture talent, particularly for those who want to learn and are willing to develop as leaders.

What has helped me?

In my career journey I have faced numerous challenges, including intense competition for higher-level positions. I have come to realise that persistence, focus, and a willingness to learn and grow are key in overcoming these hurdles. Building strong relationships with colleagues and mentors, seeking out training and development opportunities and consistently delivering high-quality work have all been instrumental in advancing my career.

I was already passionate about biomedical science and what the future held when I started my career. I understood that keeping up to date with the latest scientific advancements is vital for career growth. I therefore made it a priority to attend conferences, read scientific journals and take advantage of training and development opportunities. Seeking advice and insights into career progression from experienced biomedical scientists was also crucial.

> **“ The award boosted my confidence, showing that I take pride in my work and perform it well ”**

To expand my professional network and create new opportunities, I have collaborated on research projects and volunteered to work with other professionals in the field. I joined professional organisations, attend industry events and connect with other biomedical scientists through social media. Effective communication is vital, so I have worked on my written and verbal communication skills in dealing with patients, healthcare professionals, and other scientists. I always maintain high ethical standards, including confidentiality in handling sensitive information.

What has been the highlight of your career so far?

Being awarded Biomedical Scientist of the Year in 2022. This validated my hard work and sacrifices and left me feeling honoured, pleased, overwhelmed, and delighted. The award boosted my confidence, showing that I take pride in my work and perform it well. It encouraged black scientists, especially women, to strive for excellence in their profession and demonstrated that nothing is impossible whatever obstacles are encountered along the way. While there is still a long way to go, my hope is that I will not be the last black female scientist to reach this milestone and that many more will follow in my footsteps.

A final word

As someone who has personally experienced the struggles of navigating a career in biomedical science as a black female, I have always advocated for the next generation of scientists. I am confident that all those in healthcare will continue their efforts to combat discrimination and promote black equality, recognition, and inclusion in the profession. I believe that celebrating excellence and recognising the achievements of ethnic minorities is a significant step towards encouraging visibility and enhancing black equality. We are involved together in creating a scientific community that welcomes people of all backgrounds and respects ethnicity, diversity and inclusivity.

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CLINICAL ACADEMIC TRAINING – AN EXCITING CAREER STEP

Emilee Gosnell *is an audiologist developing a clinical academic career.*

I had been practising as an audiologist for nine years at St George's Hospital in South London when the pandemic hit. The consequent service disruption forced me out of my routine and gave me time to contemplate future career paths.

I had numerous research questions after so long in clinical practice but did not know how to initiate and implement my own project. A major barrier was finding time to network, identify willing mentors, establish links and navigate the research arena whilst working full-time. I was excited when considering a career split between patient care and clinical research, but getting there seemed out of reach.

When browsing for opportunities of where to go next I came across the Health Education England/National Institute for Health Research Pre-Doctoral Clinical Academic Fellowship (HEE/NIHR PCAF). This fellowship programme is designed for non-medical healthcare professionals and provides salaried time for clinicians to develop a competitive PhD proposal and undertake funded academic training at master's level. It is part of the Integrated Clinical Academic (ICA) Pathway[1] which supports aspiring clinical academics from internship to post-doctoral level. I decided to apply.

> **"There is a lot of juggling and working autonomously but stepping away from the fixed structure of practising as a clinician feels like being given the gift of time"**

While the application process is not for the faint-hearted, the NIHR provides detailed notes and there are plenty of online webinars for guidance. I began preparing my application four months before submission. I sought out suitable supervisors, spoke to past PCAF awardees and sent emails to clinical academics in my field for advice. I spoke to anyone who would listen. These new links have proved to be hugely beneficial to my fellowship journey and one of the greatest things I have learnt about the research community is people's willingness to help. The application itself takes a few days to get down on paper but requires several weeks to do the background research, manage the team effort of the different contributors and calculate budgets. This felt like a part-time job on its own but the learning that came with it was incredibly valuable.

In my application cohort of 59, the therapists, nurses and pharmacists led the way. I was one of only three from a healthcare science discipline.

My fellowship started in September 2022. Every day is varied, with lots of different things to do. These include completing the paperwork for and starting my two proposed research projects, studying for a PG(cert) in Clinical Research at King's College London, writing, attending webinars and meetings, and working clinically one day a week to keep up my skills. There is a lot of juggling and working autonomously but stepping away from the fixed structure of practising as a clinician feels like being given the gift of time.

I started to prepare my PhD application at the beginning of 2023. After many 14-hour days and a few long nights I submitted it in June. I was pleased to be invited for an interview with the NIHR doctoral fellowship panel in November 2023 and look forward to presenting as a healthcare scientist candidate in such a competitive scheme.

I am thankful for the opportunity this project has given me to work on myself personally, professionally, academically and clinically, both in the months leading up to it and now as I see it through. It will be a huge undertaking but, as they say, the secret to getting ahead is to get started!

The next round of HEE/NIHR Pre-doctoral Clinical Academic Fellowships should start around the end of January 2024. Why not think about exploring possibilities and start preparing your own application?

For more background on becoming a researcher and research leader, see the article by Professor Mark Tooley on page 8 of the Spring 2023 edition of this Journal.

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I DIDN'T SET OUT TO BE A LEADER

Samantha Lear draws on her career experience to reflect on what makes reflective leadership.

Sam Lear *is President of the British Association for Audiology and an adviser to the National Deaf Children's Society. She is passionate about paediatric audiology and doing the best for patients and families.*

How did you get into Audiology?

From an early age, I wanted to work in healthcare and focus on helping people. I was interested in science and initially did a science degree. I saw the breadth and flexibility of careers in healthcare science and thought I would find a niche there that suited me – which turned out to be paediatric audiology. I undertook an MSc in Audiological Science at the University of Southampton and then trained as an Audiological Scientist at Nottingham's Children's Hearing Assessment Centre.

What do you like most?

I love the challenge of assessing children's hearing and balance. Every child is different and a paediatric audiologist needs to adapt quickly to engage each child to get the best from every appointment. I have tested children underneath tables and lying on the floor throwing balls at the ceiling but this "play" is to facilitate scientific diagnostic testing. I also like communicating complex results and information clearly to families and putting them at the centre of care. I currently work clinically only one day a week but still love it after 30 years.

What else do you do?

I work three and a half days a week as the Audiology policy adviser for the National Deaf Children's Society (NDCS). I advise them on strategic direction for campaigning and influencing those with the power to change audiology provision, and help the organisation support deaf children and families. As a clinician, I help them understand what is achievable in practice. One example is external accreditation through IQIPS. The charity sees its value and also recognises services will take time and effort to get there, so providing support for interim solutions and ways to implement them will help engagement with professionals and increase the charity's credibility.

What has working for a charity taught you about leadership?

I have really valued working at the NDCS alongside people from very different backgrounds. I have learnt a lot about campaigning, including who to influence and how to do it. I have learnt that speaking truth to power sometimes requires you to state your own position clearly, in order to be heard. I am happy to be seen as outspoken but don't want to come across as argumentative, so I seek to understand other people's points of view and respect the limitations they face. I aim to keep any demands I make realistic but directed towards what I want to achieve.

> **"I have tested children underneath tables and lying on the floor throwing balls at the ceiling..."**

What other leadership roles do you have?

I joined the professional body for audiological science soon after I started in the NHS. This later joined with other bodies in the field to become the British Academy of Audiology (BAA). I came to care deeply about continuously improving patient care and saw the importance of collaboration to achieve this. I found myself volunteering to examine trainees and be a regional representative for the BAA, then joined its board of voluntary directors as membership secretary. It was so rewarding working with others like myself who want to give that bit extra to the profession.

I was on the BAA's board when the pandemic started. It wasn't at all clear how to practise audiology, given lockdowns, social distancing and school closures. I contributed to professional guidance and a Rapid Review of paediatric audiology in collaboration with other bodies. This helped me see more clearly what needed to be improved in paediatric audiology and motivated me to push for clear guidance about how best to deliver these services.

I also found myself strongly motivated to point out unfairness and to look at bias in and around our profession. This meant dealing with defensiveness and challenging responses such as, "this doesn't apply to us." I wanted the Board to appreciate

how deep unseen bias can run, including in areas such as recruitment and member representation. Any professional organisation must recognise bias if it is to represent and advocate effectively for all its members. I started an Equality, Diversity and Inclusion committee, and we surveyed members to find out about their experiences. We heard about different types of microaggression and found instances of discrimination by race and disability.

Leadership in a voluntary body

I had always thought leaders were people of a certain "type" who were trained and prepared to take on such roles. That wasn't how I felt when I started in the BAA. I only got involved because I felt passionate about my field, not because I wanted to lead. When I got onto the Board I found others who felt the same way – they wanted to contribute but hadn't specifically set out to lead. So now I try to encourage people to get involved in areas they really care about, and to lead whatever their role.

> **"The best motivation to lead comes from two things: a passion for what you do and a strong desire to make things work better"**

As volunteers we only have limited time to devote to professional issues, so it takes longer to get things done. That makes it all the more important to celebrate what we have achieved and to recognise that volunteers can only do what they are able to.

What helped you develop your leadership skills?

I started Higher Specialist Scientific Training in 2016. it took me six years to complete, lengthened by the pandemic. I originally wanted to do this to give me time to explore research at a doctorate level and to develop my expert practice. However I found the leadership and research modules to be very valuable in helping me understand my strengths and weaknesses and in enabling me to feel comfortable talking about them. It also encouraged me to focus on what I do well and to seek out and work alongside others with skills and experience complementary to my own.

Despite it being a challenge to balance doctoral level study with my clinical and professional body roles, the HSST did allow me to think outside of these. I learned that there are different ways to lead, something that has helped me be myself. I used to think you had to behave in a particular way to lead, whereas now I feel I can be authentic and lead as myself.

What else did HSST give you?

It gave me more confidence to speak out and challenge other people where necessary. Talking to people in powerful positions can be intimidating so I counter my fears by tapping into my passion for what I want to say, knowing that I do have the knowledge and experience to back this up. I am comfortable knowing the boundaries of my expertise and will be absolutely open about where they are. I also take along evidence that supports my case. In a professional context this often means using service statistics and feedback from surveys and focus groups.

What have you been working on recently?

I have just finished contributing to a recent review of audiology by the Scottish Government[1]. I was representing the National Deaf Children's Society. NHS England are also looking at ways to improve quality of paediatric audiology services and I represent the BAA on their review's Steering Group[2,3]. If you wear different hats it is important to be clear when you are speaking in an external forum exactly who you are representing and to make sure that important issues get reported to the correct group.

External reviews feel challenging to professionals – and they should be – but they aim to improve service quality and the experience of patients and their families. Part of my role is to persuade my peers of the need for change and that it is not helpful to become defensive. Instead, however difficult it is, we can see each review as an opportunity to learn and improve. Highlighting systemic problems and barriers to providing good care opens up possibilities for change and opportunities to obtain support. Embedding quality assurance into what we do is key to developing a culture of service improvement.

Where do you see clinical leadership going in the future?

I see a lot of Audiology service leads who get drawn away from their clinical focus into the management of resources and activity. Clinical leadership should however have a different focus and I would like to see more Consultant Healthcare Scientist roles where individuals can practise and develop their expertise without carrying an additional burden of responsibility for service operational management. This 'big picture' approach is more like the medical model, where service quality, innovation and improvement are central and responsibility is centred on the patient and their care. There are currently very few consultant roles in audiology but the need for them should grow as services become more devolved, for example with the establishment of Integrated Care Boards (ICBs) in England.

A last word

Clinicians need to be leaders but they don't need an official title. The best motivation to lead comes from two things: a passion for what you do and a strong desire to make things work better. You can be yourself but remember to check your focus is in the right place and aligns with your values. For me this means looking to patients and their care and supporting professionals to improve. I have no interest in leading just for the sake it.

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MAKING LINKS ACROSS THE WORLD – AND CHANGING PEOPLE'S LIVES

Paisley Hall

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

My background

I have always wanted to do charity work. I planned to complete a gap year working in healthcare in the developing world but unfortunately this never came to fruition. Instead I went to the University of Southampton to study for my undergraduate degree in Cardiac Physiology.

Since graduating with a BSc First Class Honours degree under the Practitioner Training Programme I have had an unwavering determination to continue learning and to help those around me. I have achieved British Heart Rhythm Society certification and more recently went through AHCS Scientist Training Programme Equivalence. Making my professional development a priority and gaining recognition as an HCPC Registered Clinical Scientist has continued to grow my passion for what I do. What I learned has helped me set up education and training programmes within my hospital. It also equipped me to collaborate in research trials and to lead my own. I have established new standard operating procedures and treatments both in my Trust and internationally. I also presented the outcomes of a research project I undertook at the European Heart Rhythm Association in April 2023 and have subsequently been in contact with a device company to discuss how to improve patient outcomes with a simple change to their current guidance.

These achievements have enabled and encouraged me to take on projects I could previously only dream of. One of them is working with Pace4Life, a charitable programme that I first heard about last year. As soon as I found out about it I immediately jumped at the chance to become involved.

> **“ The Pace4Life programme's mission is to recycle and re-use devices from the developed world for use in the developing world ”**

What is Arrhythmia-Alliance's Pace4Life programme?

Every year up to two million people die in the developing world because they cannot pay for or access lifesaving cardiac device implants and operations, such as provision of a pacemaker or implantable defibrillator.

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

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

What am I doing?

Our hospital, like many others across the UK, collects all expired devices, leads and accessories and sends them to the Pace4Life programme where they are processed through a strict FDA approved re-sterilisation process before being shipped all over the world for re-use.

My next step is a mission to Lagos, Nigeria where I will assist with implants, run follow-up clinics for pre-existing patients and educate local staff on device programming, implantation and troubleshooting. In the future we hope to reciprocate by welcoming staff from Nigeria back to Birmingham to continue their training.

The days will be long, to ensure we make the most of our time there. People who have already completed similar missions have told me it is the hardest yet most rewarding thing they have ever done. I can't wait to get started.

I believe this visit will develop my capabilities and experience beyond what I can imagine, including enhancing my lateral thinking and problem solving skills. I hope to return as a better cardiac physiologist, more able to ensure safe and effective patient outcomes and with a greater understanding of patients and hospitals in the developing world. I am so grateful to have been given this opportunity. I truly believe I can make a real difference to the cardiac rhythm management care provided in Nigeria, India and globally.

Looking to the future

I have also been tasked with setting up a connection between my department and a hospital in India. Building on the Pace4Life framework, I aim to build a relationship where we regularly send our staff to India on training missions and also provide their staff with teaching and experience in the UK. We will also work to provide a consistent supply of equipment for our colleagues in India.

Overall

I really believe in this charity's mission. The work of Pace4Life makes a significant difference to lives all over the globe. It is so rare to find charitable work opportunities which suit my profession so perfectly.

Pace4Life
Reusing pacemakers

If you are interested in becoming involved, no matter how little time you may have to spare, please visit www.pace4life.org or email trudie@heartrhythmalliance.org for more details. There is no set time commitment, so you can do as little or as much as you want. My mission to Lagos will be recorded and available to watch after we return, so you can get an in-depth view of what we get up to. As healthcare science professionals, we need to take a closer look at what we do, what we use and why. We need to consider what we can change and where we can make small gains. We need to work together across organisations, member bodies and with suppliers to reduce any negative impact our practice has on this planet.




Photos of Paisley Hall's 2023 working visit to Lagos

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LEADERSHIP LESSONS FROM ENGAGEMENT IN AN INDEPENDENT REVIEW OF A NATIONAL HEALTHCARE SCIENCE SERVICE

John Day and Adrian Carragher share their leadership reflections on participating in a politically prominent national review exercise.

John Day *is Clinical Director of Audiology, Betsi Cadwaladr University Health Board, North Wales. Before participating in this review he had had previous experience at national level managing an audiology modernisation project in Wales and in developing audiology service quality standards.*

Adrian Carragher *is an audiologist and Head of Audiology Service, NHS Ayrshire and Arran, Scotland. He is a non-executive director on the Health Board and has experience of working in the audiology industry and of secondment to a government role.*

The task

The Independent Review of Audiology Services in Scotland was commissioned by the Cabinet Secretary of Health and Social Care after concerns were identified about the standard of care provided by a health board in Scotland. The review was asked to examine audiology services and make recommendations on how these could be improved.

The approach

In brief, a Review Board was established with three sub-groups looking at areas critical to the quality of audiology care and patient outcomes:

- Structures, governance and leadership
- Education and training of staff
- Quality assurance of services.

A gap analysis-based approach was followed for each stream of work, requiring information gathering, analysis and a synthesis of recommendations. A Reference Group provided a service user perspective.

Media interest over care shortfalls for children with hearing loss and their families meant that the review had a high political profile and ministerial engagement. This created a strong motivation to address issues facing this vulnerable patient group. The review's full report is online[1].

> **"When engaging with fellow leaders and experts at this level I found it challenging to get the balance right between listening and leading"**

Why take part in this review?

John Day: At a personal level I have always been motivated to influence the bigger picture wherever it ultimately impacts on patient outcomes. I see that as a key facet of senior healthcare science leadership. I also see the benefits of collaborative leadership at a national level in my day job when working with peers, government and others to advance audiology services in Wales.

Adrian Carragher: I have been part of the Scottish audiology community for many years and relish the opportunity to improve audiology services at local or national level, so when this opportunity presented itself I happily took it on.

Reflections and lessons learnt

John: Because of my prior experience working at national level, I was appointed as the Independent Vice Chair of the review and also chaired the review's Quality Assurance sub-group. Being an effective chair involves recognising different stakeholder viewpoints and objectives and then looking for common ground. We were fortunate that although people had different priorities everyone involved in the review agreed on the need for improvement.

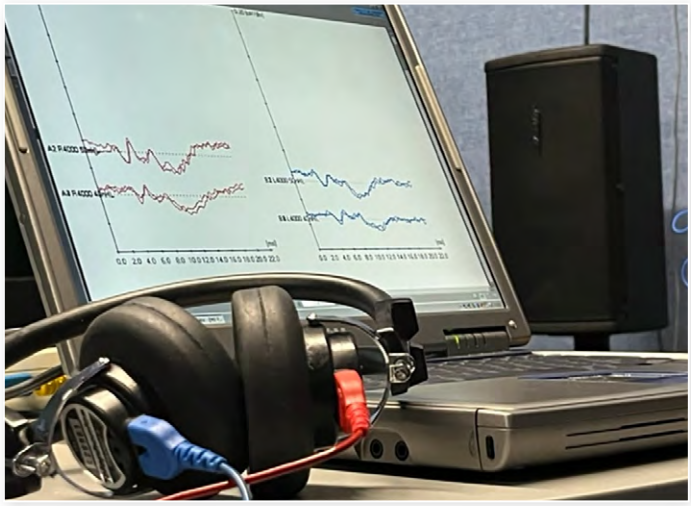
When engaging with fellow leaders and experts at this level I found it challenging to get the balance right between

listening and leading. When seeking to harness individual skills and contributions I found it helpful to consider each person's perspective and what they wanted to achieve from participation in the review when steering the conversation. Sometimes it was necessary to be more assertive, particularly when an individual kept focusing on a particular area and we needed to hear from other contributors or move on to another topic.

A particular challenge was judging how to match the depth and breadth of our work to the time and resources available. Too limited a scope would miss opportunities to diagnose shortfalls that needed to be addressed, and overextension could lead to an incomplete appraisal, flawed outcomes, and exceed the capacity of stakeholders to respond. This is a problem with any review and some flexibility is required, as not everything is predictable. Unforeseen issues can mean adjusting time targets and even require negotiation over the scope or objectives of the review with those who commissioned the work.

> **"The project resulted in some extreme peaks to my personal workload alongside my day job leading a healthcare science service"**

The project resulted in some extreme peaks to my personal workload alongside my day job leading a healthcare science service. However, I am glad I put myself forward and would recommend doing the same to other healthcare scientists presented with a similar opportunity. It was encouraging to work with and learn from others, particularly those who bring their own leadership experience to the table. It also reinforced my respect for those who volunteer or go the extra mile.



Adrian: I chaired the review's Structure, Governance & Leadership subgroup. Now that the dust has settled on the review's work, my initial reaction is relief that it is complete. Described to me at one point as a "once in a lifetime opportunity for audiology", it is clear that the resources put into this work are unlikely to be matched again. More time and extra people would have made life easier but just how much resource is needed for a national review of this magnitude and complexity is something we have still to work out.

I am no stranger to chairing meetings but for the first time in a while I found myself feeling anxious and nervous. I initially thought I was worrying about the potential for conflict, given the diversity of people and views in our group. In fact my colleagues found diversity to be a very positive part of the group's makeup and we got on incredibly well. We worked constructively through issues, challenging ideas, views and proposals and reaching agreement almost all of the time. On reflection I think my anxiety came from being involved in a project that is potentially life changing, both for me as an audiology professional and also for the population I serve.

Would I change my approach should I ever participate in something of this scale again? The answer is "yes". Effective time management includes being clear from the outset what time you can give and then respecting that limit as much as you can. If you exceed it, things can get messy and stressful.

What happens next?

John: Now that the review has concluded others must take forward its recommendations, and I wish them well. I was mindful throughout the process that the outcome of a successful review is to set services on a viable path for sustained improvement and I do hope that this will be the case.

Adrian: This was an opportunity to be part of the biggest and most important change ever made to audiology service delivery in NHS Scotland and collaborative Healthcare Science leadership across the health system will be essential to making the 2023 review a success.

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IDEAS FOR IMPROVING PATIENT INFORMATION

Analysing Patients' Social Media threads

Healthcare Scientists and Clinical Research Practitioners may develop information for patients or present it to them, with their clinical and academic colleagues. An understanding of how patients access, interpret and discuss information about their healthcare and the underlying science is essential when designing education and support programmes intended to increase the effectiveness of healthcare.

A systematic review of social media use in health identified its potential to provide targeted health education and peer support to reduce outcome inequity, increase health literacy and improve overall population health[1]. Analysing the online and social media activity of service users with long term conditions can help healthcare providers better understand individual and general health educational needs, potentially improving outcomes[2].

A pilot study was carried out to observe discussion threads on two renal support groups. The adult Renal Patient Support Group[3] started in 2009 and has more than 10,000 members worldwide. The paediatric Kidney Disease and Renal Support for Kids platform[4] began in 2014 and now has over 2,000 members globally.

Methodology

Fourteen topic tags were selected after reviewing the content of online discussions for both support groups. These tags were relevant to a general and international renal population and were applied to discussion threads taking place for two weeks in March and April 2020 on each forum.

Findings

Over the two-week study 2,560 threads were topic tagged across the two groups. Table 1 presents the number and percentage of total tags for each group, by topic.

Both groups frequently discussed Renal Replacement Therapy (RRT) and Medication. Adults focused additionally on Lab Tests and Nutrition, whilst paediatric patients and carers were more concerned with Peer Support and Nursing and showed little interest in the Educational & Interactive topic.

Further retrospective analysis of both group discussions over several years revealed common trends. Earlier in the life of both forums there was an emphasis on exploring 'core' topics such as RRT, Laboratory Tests, Medication, Nursing, Nutrition, Psychology and Primary Care. Interest later developed in Lifestyle, Wellness and Exercise.

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> **"An understanding of how patients access, interpret and discuss information about their healthcare and the underlying science is essential... "**

Discussion

Previous work indicated where patient healthcare education initiatives might be directed in nephrology and informed the way discussion topics were chosen in this study[5]. Results indicate that social media discussion tagging can help to identify patients' interests and knowledge gaps. This provides a leadership opportunity for healthcare scientists and informatics colleagues who are striving to achieve best practice.

Table 1:
Number and percentage of tags for each topic, for each group

Topics tagged	N Adult tags	(%)	N Paediatric tags	(%)
Renal Replacement Therapy (RRT)	166	(12.7)	133	(10.7)
Lab Tests & Biomarkers	137	(10.3)	109	(8.7)
Medication & Pharmacy	135	(10.3)	148	(11.9)
Diet & Nutrition	116	(8.9)	91	(7.3)
Biopsy & Surgery	97	(7.4)	91	(7.3)
Lifestyle	93	(7.1)	90	(7.2)
Covid-19 & Infections	93	(7.1)	69	(5.5)
Psychology& Related	85	(6.5)	94	(7.5)
Wellness & Wellbeing	82	(6.3)	60	(4.8)
Educational & Interactive	70	(5.3)	6	(0.5)
Nursing	69	(5.3)	115	(9.2)
Exercise	65	(5.0)	59	(4.7)
Primary Care (GP)	64	(4.9)	59	(4.7)
Peer Support	39	(3.0)	125	(10.0)
Total	**1311**	**(100)**	**1249**	**(100)**

The highest four tags in each group are highlighted

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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.

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