

The Turner-Warwick lecturer scheme 2023 yearbook



Royal College
of Physicians

Welcome to the 2023 Turner-Warwick lecturer scheme yearbook

The Turner-Warwick yearbook marks another successful year of this annual lecturer scheme. It also offers one more opportunity for us to celebrate the achievements of our 12 trainee lecturers and to further showcase their winning abstract submissions, which we hope you will find interesting.

This flagship scheme commemorates the life and achievements of Professor Dame Margaret Turner-Warwick, the first female president of the Royal College of Physicians (RCP) and an internationally regarded respiratory physician.

Her pioneering role in the development of modern respiratory medicine was the inspiration for the scheme, which offers a platform for trainees to share their own novel and progressive research.

This year, each lecturer joined us at one of our Update in medicine conferences, which are held across the UK, and had the opportunity to present alongside more senior colleagues. We're thrilled that 2023 has seen the return of in-person Turner-Warwick lectures as it allows trainees to perfect their public speaking, disseminate their research to a wider audience and network with clinicians in their region.

The breadth and quality of submissions this year is testament to all who applied, and if you didn't manage to catch any of the lectures in person, we encourage you to take a look at the digital Turner-Warwick lectures on [RCP Player](#).

As you can see below, when asked to summarise their experience, our 2023 Turner-Warwick lecturers shared feelings of empowerment, encouragement and recognition and we're delighted to have had the opportunity to showcase their achievements.

RCP Regional Team



A word cloud of feedback from the RCP Regional Team. The words are arranged in a roughly circular pattern, with some words being larger and more prominent than others. The colors of the words are primarily black, red, and blue.

professional
encouraging
enjoyable
worthwhile
empowering
ambitious
recognition
educational
exciting
advancement
gratifying
an unbelievable journey
opportunity
big confidence boost
challenging
confidence-building
prestigious
collaboration
inspiring
varied
stimulating
supported
dynamic

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Benjamin Lindsey

Sheffield Teaching Hospitals NHS Foundation Trust

The use of whole genome sequencing to characterise hospital outbreaks of COVID-19



Dr Nicolai Grüner-Hegge



Organisation: Cambridge University Hospitals NHS Foundation Trust

Grade: IMT3

Region: Eastern

'I applied to the Turner-Warwick lecturer scheme because it is a great opportunity to present my research to a wider audience. I also saw it as an excellent opportunity to further hone my presentation skills.'

Lecture title: Shared decision-making in cardiology: rationale, evidence and implementation

This lecture presents the rationale of the patient-centred framework of shared decision-making (SDM), examines the evidence for its effectiveness, and reflects on our experience with implementation and the barriers encountered. SDM facilitates the right of involvement for patients, allowing them to take a more active role in decisions regarding their health, thereby allowing patients to take ownership of their care. This can increase patient satisfaction, reduce overuse of treatments without clear benefit, reduce healthcare practice variation and therefore improve the sustainability of the healthcare system. We conducted a protocol-driven, prospectively registered systematic review, including 18 randomised controlled clinical trials reporting on 4,419 patients in cardiology. Meta-analysis across these studies showed a significant reduction in decisional conflict (standardised mean difference [SMD] -0.211, 95% CI -0.316 to -0.107) and an increase in patient knowledge (SMD 0.476, 95% CI 0.351 to 0.600), with pre-specified subgroup analysis suggesting effectiveness of SDM over a wide spectrum of subspecialties and using different strategies to facilitate its use. Sensitivity analysis confirmed robustness of the data presented, and we did not find evidence of publication bias.

A thorough analysis of the included studies will be provided. Despite its effectiveness, several barriers to implementation persist and these are discussed in detail. We, and others, have found that clinicians' attitudes, lack of resources and time restraints are major barriers to its widespread utilisation in standard care. Further research investigating implementation strategies is urgently needed to facilitate a paradigm shift towards this patient-centred framework providing high-quality care.

'Being involved in the scheme provided me with an opportunity to share my research with colleagues from different specialties and expand my network beyond my field of interest. Being part of the Turner-Warwick lecturer scheme has helped boost my confidence in presenting research to a wider and expert audience.'



'The talk inspired me to think about shared decision making in ITU admissions for other medical specialties.' – 2023 delegate

Dr Rosemary Arnott

Organisation: United Lincolnshire Hospitals NHS Trust

Grade: ST6

Specialty: Geriatric medicine and general internal medicine

Region: East Midlands



'I felt that the research I had done – into the factors influencing the transition from medical student to doctor – was an important topic that needed wider understanding in our challenging times. The lecture series seemed to offer an excellent opportunity to share this topic more widely and acknowledge the hard work I had put into my master's dissertation.'

Lecture title: Influences on preparedness to practise: exploring the experiences of UK medical graduates during the COVID-19 pandemic.

The transition from medical student to doctor is known to be challenging and stressful.¹ This lecture will explore what is known to influence the preparedness of medical students for clinical practice and how the COVID-19 pandemic impacted the medical graduates of 2020 and 2021.

Methods

Semi-structured interviews with foundation year doctors who were UK graduates using a purposive and snowball sampling technique underpinned by the theoretical framework of hermeneutic phenomenology were undertaken. This theory proposes that meaning can be found through the joint experiences and interpretations of researcher and participant.² Therefore, my unique insight as a clinical teaching fellow (2019–21) will further enrich the conclusions.

Themes

The challenge of COVID-19 left a negative legacy for some, although all saw personal growth. Growth through the clinical 'steep learning curve' was aided by a supportive environment and effective clinical exposure pre-graduation. Postgraduate training was perceived as poor. Preparedness was to practice safely and competently with a willingness to learn.

Challenge is necessary for growth and learning, therefore preparedness should aim to support the challenge through correct skills and attributes. Thriving is optimised within a psychologically safe environment with good supervision.

References

1. Brown MEL *et al.* A phenomenological study of new doctors' transition to practice, utilising participant-voiced poetry. *Advances in Health Sciences Education*, 2001;26:1229–53. doi: 10.1007/s10459-021-10046-x.
2. Lopez KA and Willis DG. Descriptive versus interpretive phenomenology: Their contributions to nursing knowledge. *Qualitative Health Research* 2004;726–35. doi: 10.1177/1049732304263638.

'I was surprised and gratified at the recognition from consultant colleagues that I received on gaining the award. I think it gives my research more credibility and has opened the door to its publication as I seek to share the conclusions more widely.'

Dr Matthew Cox

Organisation: Royal Surrey NHS Foundation Trust

Grade: ST4

Specialty: Acute medicine

Region: Kent, Surrey and Sussex



'I applied for the Turner-Warwick lecturer scheme after one of my consultants encouraged me to do so. I thought that it was a great opportunity to share some of the work I had been doing, and try to get people excited about clinical governance and medical errors.'

Lecture title: Lessons learned – educating doctors in training on clinical governance and serious incidents

This lecture will describe ways to provide high-quality training on the topic of clinical governance and learning from local medical errors for trainee doctors, while exploring the challenges and barriers to education posed by our training system.

Medical errors are a near-inevitable part of a career in medicine and can cause significant stress for doctors, with a wider context of mistrust around regulation. Trainee doctors often have little training in clinical governance and rotate hospitals frequently, so are often not well-embedded into hospital governance processes.

We set up a range of interventions with the aim of improving trainee understanding of and trust in governance processes, improve understanding of medical errors and disseminate learning from local serious incidents. Interventions included a targeted intervention based on Datix data, a twice-monthly email with quick read teaching, a lecture series and a newly structured morbidity and mortality meeting.

Following intervention, we found that 35% (pre-intervention 23%) of trainee doctors felt well or very well informed about clinical governance, 82% (pre-intervention 57%) had access to relevant teaching and 63% of staff felt our trust had a no-blame culture (compared with 30% for the NHS in general).

'Dr Matthew Cox impressed both by his passion - and his refreshing honesty about the ongoing impact of his project and interventions.' – 2023 delegate

Our key learnings were:

1. There is high demand for teaching on governance and errors – doctors want to engage with medical errors!
2. Rotational nature of trainee doctors is a barrier to being engaged and embedded in local hospital culture – if you do not specifically target rotational doctors, they won't be a true part of your organisation.
3. Learning from serious incidents is poorly disseminated to trainee doctors – we need to have specific ways of getting learning to rotational doctors.
4. Traditional lecture based teaching is often inaccessible for doctors in the current NHS climate – we need to be creative about how we enable training for doctors.

'Doing the Turner-Warwick lecture was a real privilege. It was the first opportunity I have had to speak at a conference and it was great to share something I am passionate about with the wider profession. It was a brilliant confidence boost and a positive experience at a time when being a trainee in medicine is challenging and morale is low.'

Dr Waqas Akhtar



Organisation: Guy's and St Thomas' NHS Foundation Trust

Grade: ST11

Specialty: Cardiology

Region: London

'The Turner Warwick lecturer scheme is a great opportunity for trainees to showcase the impact junior doctors can have on the NHS to a wider audience.'

Lecture title: Mechanical life support

It can be daunting for a trainee doctor rotating to a cardiac hospital having to deal with life-threatening situations in patients with mechanical circulatory support such as LVAD, ECMO and Impella. These are becoming more commonplace and the first responders are often those with the least experience and where ALS is not always the best approach.

We developed by iteration, a novel in-hospital resuscitation algorithm for LVAD, Impella and ECMO emergencies, which we validated through simulation and assessment of our multidisciplinary team. A mechanical life support course was established to provide theoretical and practical education combined with simulation to consolidate knowledge and confidence in algorithm use. We assessed these measures using confidence scoring, a key performance indicator (the time taken to restart LVAD function) and a multiple choice question (MCQ) examination. We showed statistically significant improvements in all these domains.

We are now in the process of developing national consensus and adoption by the Resuscitation Council and have run the course at international conferences. The course and algorithms was also highly commended in the 2022 *HSJ* patient safety awards. In this lecture, we discuss the process of QIP, development of new algorithms, development of a new education course, validation and then national and international spread of learning.

'The lecturer scheme empowers trainee doctors to take deeper and wider roles in management and leadership within the NHS. Quality improvement and service development that is vitally needed can be led through the unique perspective of trainee doctors who rotate through several institutions and see how things are done best.'



Overall winner

of the 2023 Turner-Warwick lecturer scheme and RCP member since 2012.

Dr Mark Ellul



Organisation: The Walton Centre NHS Foundation Trust

Grade: ST7 (NIHR ACL)

Specialty: Neurology

Region: Mersey

'I heard about the Turner-Warwick lectureship from my academic mentor, who encouraged me to apply. I decided to take the opportunity to put in an abstract as a way of furthering my engagement with the RCP, and with physicians from a wide range of disciplines.'

Lecture title: Identifying viral and autoimmune encephalitis using proteomic and metabolomic profiles in CSF

Encephalitis is a devastating neurological condition, most often caused by either acute viral infection or an autoimmune process, but mimicked by other neurological or systemic disease states. In this lecture I will discuss challenges and pitfalls in the clinical diagnosis of encephalitis, and novel approaches to identifying biomarkers to improve diagnosis and expedite appropriate treatment. Through multi-centre UK studies, we recruited patients with encephalitis (both viral and autoimmune), mimicking conditions including delirium, toxic and metabolic disorders, and controls with headache disorders.

Using samples from these patients we analysed the CSF proteome using liquid chromatography-mass spectrometry (Orbitrap LC-MS/MS) in an initial discovery analysis to identify putative biomarkers and validated these in a second group showing their potential to distinguish diagnostic categories. In the same cohort of patients, we analysed CSF using ¹H nuclear magnetic resonance (NMR) spectroscopy to construct metabolomic profiles. We identified both proteins and metabolites able to distinguish both viral and autoimmune encephalitis from mimics. The most effective protein markers had ROC AUC of >0.95 for identifying encephalitis, including in those with normal CSF white cell count. Using pathway enrichment analysis we identified protein networks enriched in viral encephalitis, especially concerned with the

innate immune response and the complement and coagulation cascades. Several protein candidates correlated with clinical outcome offering the potential to stratify early treatment strategies. I will explore how novel diagnostic strategies might complement the current clinical approach to encephalitis diagnostics, including discussion of metagenomic sequencing and rapidly expanding phenotypic range of autoimmune encephalitis.

'The Turner-Warwick scheme allowed me to showcase my research to a wide audience of physicians outside my specialist area who engaged fully with the talk and the interesting Q&A session. It was a privilege to be part of the lecturer scheme and, as well as having pride of place on my CV, it has given me renewed confidence in communicating my research and engaging with multidisciplinary colleagues.'

Dr Stuart Maitland



Organisation: Newcastle University

Grade: IMT2

Specialty: Internal medicine (clinical neurophysiology ACF)

Region: Northern

'The Turner-Warwick lecture prize stood out to me as a clinical academic award that not only recognizes research contributions, but also provides me the chance to share my findings with colleagues and inspire future advancements in the field. It is a golden opportunity to amplify my impact and foster meaningful collaborations within the medical community.'

Lecture title: Is muscle weakness getting on your nerves? The neurophysiology of sarcopenia

Sarcopenia ('poverty of flesh') is a disease representing the progressive degenerative loss of muscle mass and strength associated with ageing. While most adults lose strength with age, sarcopenia represents a disabling level of muscle dysfunction, and is a significant cause of morbidity and contributor to medical admissions.

Sarcopenia is a multi-factorial disease involving nutrition, oxidative stress and exercise; however, even consideration all of these factors does not explain the variability of disease in sarcopenia. Indeed, there is growing evidence that neurological factors are equally implicated in sarcopenia via several mechanisms, which I have investigated.

Peripherally, these include motor unit death and instability of the neuromuscular junction, for which I have developed two novel forms of EMG (electromyography) to investigate further (MicroEMG and ultrasound-guided EMG).

Centrally, spinal pathway remodelling and compensation is also involved. I used transcranial magnetic stimulation (TMS) to elicit motor evoked potentials in the reticulospinal and corticospinal tracts of younger (age 18–50) and older (age ≥ 50) adults and measure their correlation with grip strength.

Younger adults had a significant negative correlation between normalised grip strength and ICAR ($r=-0.37$, $p<0.05$) whereas in older adults, the correlation was highly significant, but positive ($r=0.43$, $p<0.005$). When compared, there was a significant difference between these groups ($p<0.05$). This demonstrates that older individuals who maintain or strengthen their RST lose less strength than their peers.

Understanding the neurological contributions to sarcopenia is vital to better characterise this disease, which can be extremely challenging to prevent and rehabilitate using 'muscle-first' therapies.

'The Turner-Warwick lecture provided an opportunity to share my research among clinical colleagues, both within my regional meeting, and through a broader audience online.'



Showcasing our lecturers - a platform for outstanding trainees

The Turner-Warwick lecturer scheme provides a unique opportunity for winning trainees to present at the RCP's Update in medicine conferences held across England, Wales and Northern Ireland. These one-day conferences are designed to be of educational value to a general medical audience and allow colleagues to stay abreast of clinical advancements in medicine, develop their professional skills and network with peers.

The conferences provide trainees with a platform to profile their outstanding work and share the impact of their project in a face-to-face environment, encouraging engagement with the topic and allowing for direct feedback from the audience.

[Find a conference near you!](#)

'The lectures are always a highlight of the conference programme; it is rewarding to hear from our trainees first-hand about the great work they are justifiably so passionate about.'

Professor Cathryn Edwards,
RCP registrar





Mark Ellul and Dr Sarah Clarke, PRCP



John McDermott



Professor Cathryn Edwards, RCP registrar

What makes a successful Turner-Warwick application

Dr Adrian Jennings, clinical lead for the Turner-Warwick scheme and consultant physician in King's Lynn shares his thoughts on what makes a good topic for submissions and what the judges were looking for.

'Turner-Warwick lectures can be based around the trainee's clinical research, quality improvement project (QIP) or achievements in medical education. Judges will expect the topic of the proposed lecture to be relevant to a wide audience and not just those in a single specialty. The lecture itself should include an evidence-based overview of the clinical topic, before going on to describe the trainee's research, QIP or educational achievements.

Judges will be assessing the extent to which the lecture will impact physicians' knowledge and/or practice in a clinical topic or medical education. If the abstract describes clinical research

'The Turner-Warwick lecturer scheme not only showcases our outstanding trainees who encompass RCP values, it also opens the door to future collaborations through the opportunity to present to the wider physicianly community.'

Dr Sarah Clarke, PRCP

they are likely to expect some statistical analyses in the abstract. For a lecture describing a QIP or achievements in medical education, they are likely to be looking for a significant beneficial effect and whether there is evidence of a sustained effect or, if not, whether there are plans describing how sustained improvement might be achieved.'

If you would like to be notified about when the next Turner-Warwick lecturer scheme will open, please sign up to receive notifications [here](#).

Dr John McDermott

Organisation: Manchester University NHS Foundation Trust

Grade: ST5

Specialty: Clinical genetics and NIHR doctoral research fellow

Region: North Western



'This award provided an opportunity to showcase my work to colleagues from several specialties, allowing me to highlight the interdisciplinary nature of our programme. I was encouraged to apply by my training programme director, who recognised the value of promoting pharmacogenomics in the forum.'

Lecture title: Implementing pharmacogenetics in the NHS: improving outcomes and avoiding harm

Medicines are the most common therapeutic intervention in healthcare, yet their effectiveness and safety show considerable inter-personal variation. There is an increasing awareness that response to medicine is affected by an individual's genetic variation, a concept known as pharmacogenetics. Access to pharmacogenetic data at the point of prescribing could lead to improved medicines selection, leading to improved outcomes and better use of scarce healthcare resources.

Despite pharmacogenetic data being used routinely to guide prescribing in many centres around the world, there have been relatively few examples of implementation in the UK. The reasons for this are multifactorial and will be explored in this lecture, initially via characterization of existing pharmacogenetics programmes (n=40) using the Consolidated Framework for Implementation Research. A common theme across these programmes is the critical importance of a timely result. Timeframes for genetic testing are traditionally measured in months, which is an unacceptable delay when making prescribing decisions. To overcome this, we developed a rapid point of care test, able to detect genetic variation from a cheek-swab in 25 minutes. This system was successfully integrated into routine clinical practice to avoid aminoglycoside induced ototoxicity and can be adopted to tailor

antiplatelet prescribing. This lecture will conclude by outlining development of a pharmacogenetic service in England, focusing on design of an informatic solution to return results. Implemented properly, pharmacogenetics could save resources for the health service while improving outcomes for patients across all specialties.

'Over 200 attendees were present at the event and there was excellent engagement from the audience. As a result of the meeting I have had correspondence from a number of colleagues to discuss implementation programmes at their institute.'

 **RCP Player**

Dr David Wen

Organisation: Oxford University Hospitals NHS Foundation Trust

Grade: IMT2

Specialty: Internal medicine / dermatology

Region: Oxford and Thames Valley



'I applied because the lecture would be an excellent opportunity to showcase our work to a broad audience. It would also be a good forum to foster dialogue on how other specialties may be impacted by our findings.'

Lecture title: Characteristics of open access skin cancer image datasets used to train artificial intelligence algorithms: implications for equitable digital health

This lecture will review machine learning applications in healthcare, outline the results of our systematic review, and discuss its implications for patient care and health equality. Open-access datasets are increasingly used to develop machine learning algorithms for disease diagnosis, particularly skin cancer. However, the content and number of datasets available is unclear.

This systematic review evaluated open-access skin image datasets used to train algorithms for skin cancer diagnosis by exploring dataset characteristics and associated image metadata.

Overall, 21 retrospective datasets containing 106,950 skin lesion images were identified. Among the 14 datasets reporting country of origin, 11 (79%) originated from Europe, North America and Oceania exclusively. Only two datasets (9%) reflected clinical practice, containing paired dermoscopic and macroscopic images. Clinical information was available regarding age for 81,662 images (76%), sex for 82,848 (77%), and body site for 79,561 (74%). Histopathological diagnoses were available for 69% of malignant lesions. 1,415 images (1.3%) had ethnicity data. 2,236 images (2.1%) had Fitzpatrick skin-type data, of which only eleven (0.5%) were from darker-skinned individuals (type V–VI).

This systematic review highlights limited and variable reporting of key characteristics and metadata among datasets. Datasets had restricted population representation with substantial under-representation of darker skin types, precluding generalisability to real-life clinical settings. Similar biases have been identified in radiological and ophthalmological image datasets. Quality standards outlining minimum metadata reporting for medical image datasets are urgently needed. Prospective image collection is required to build unbiased, representative datasets, ensuring developed algorithms benefit individuals of all ethnic backgrounds and varying skin types.

'It has been fantastic to represent dermatology on the general medical stage, and to stimulate discussion around the importance of data used to train artificial intelligence technologies. Colleagues have reached out to me after watching the talk online and there were also some thought-provoking comments during the in-person event.'

Dr Alexander Royston

Organisation: Somerset NHS Foundation Trust

Grade: IMT1

Region: South West



'I believed this was a totally original project, looking at an intuitively important subject and tackling it in a novel and interesting way. I felt it deserved some exposure and the Turner-Warwick lecturer scheme felt like a logical way to approach this.'

Lecture title: Using systems thinking to model tension between service provision and training postgraduate doctors in an NHS trust

Introduction

This lecture explores the tension between the potentially conflicting requirements of service provision and training for postgraduate doctors in an acute NHS trust. Principles of systems thinking were applied to highlight possible tension and explore institutional boundaries that add complexity.

Methods

Interviews were held with key figures within trust management and regional/local HEIW/HEE: health board/trust COO, clinical directors, director of medical education, guardian of safe working, local and regional programme directors, HEE/HEIW leadership associate dean, patient partners and postgraduate doctors.

Results

Functional requirements and key resources were identified. What must a hospital provide vs what conditions do trainees need to achieve their curriculum goes? Salado's Tension matrix was constructed¹ and tension was identified when different requirements competed for the same resource across the service provision-training interface. Consultant supervisors were identified as the most depleted resource, and supply of resources was more commonly a limiting constraint over finance. A systems map was created to highlight boundaries, interdependence, and unequal power distribution: the challenges of LTFT working were described.

1. Mismatch between clinical capacity and operational demands may threaten both patient safety and doctor welfare. Data is vital and exception reporting is under-used which needs improvement. Non-consultant supervision (including registrar-mentoring) and creative use of the MDT (physician associates/CNPs) are possible approaches to start addressing this mismatch.
2. Pre-dominance of service provision over training during OOH periods means potentially valuable training opportunities are missed.
3. TFT creates challenges for rota managers, heightened by stark power imbalances between trusts/health boards, HEIW/HEE and trainees.

References

1. Salado A, Nilchiani R. The tension matrix and the concept of elemental decomposition: improving identification of conflicting requirements. *IEEE Systems Journal* 2019;11:2128.39.

'The scheme has given me the confidence to put my work out there and has provided me with self-belief to pursue avenues that may be less commonly explored. I am looking forward to using this as a platform for more projects and research endeavours in the future, particularly those involving systems thinking.'

Dr Bethan Davies

Organisation: Cwm Taf Morgannwg University Health Board

Grade: ST4

Specialty: Cardiology

Nation: Wales



'I was really proud to be part of this project, and the Turner-Warwick lecture felt like a great platform to tell people what we had achieved and potentially provide the spark for us being able to recreate it elsewhere.'

Lecture title: A pathway to improving syncope care

The Adult Syncope Pathway aimed to improve care and reduce admissions for those presenting to the emergency department (ED) with syncope.

Syncope is a common ED presentation. An initial audit found that 51.4% of patients were admitted to hospital. Two-thirds stayed under 24 hours and almost half went home with a diagnosis of vasovagal syncope or postural hypotension. The most common investigations were lying/standing blood pressure testing and head CT. 7% had inpatient echocardiogram and 9% inpatient ECG monitoring; generally these required a longer stay.

European guidelines¹ suggest low-risk patients can be discharged directly from ED and some higher risk patients can be safely managed via ambulatory emergency care (AEC).

Creation of the pathway involved consensus building between the ED, acute medicine and cardiology departments to agree how patients would be risk stratified and managed. A programme of education on the assessment of syncope and use of the pathway followed.

Following referral, AEC review was undertaken within 48 hours. The AEC team were given access to same day echocardiogram and holter monitoring. Rationalising those who required further investigation enabled better targeted diagnostics and more efficient care.

An iterative process of feedback and outcomes review was undertaken to ensure safety and seek areas of improvement. At first review those discharged directly from ED had increased by 7% and admission was avoided in a further 14% via referral to AEC.

The pathway has run successfully for 2 years and a re-audit is underway. I now hope to introduce this model elsewhere.

References

1. Brignole M *et al.* 2018 ESC Guidelines for the diagnosis and management of syncope, *European Heart Journal* 2018;39:1883–1948, <https://doi.org/10.1093/eurheartj/ehy037>

'Giving the lecture (to such a benign crowd) really improved my confidence public speaking. It has also been a great networking opportunity and resulted in various suggestions for how to take the project forward in the future.'



Dr Chern Hsiang Choy



Organisation: University Hospitals Birmingham NHS Foundation Trust

Grade: Clinical fellow

Specialty: Cardiology

Region: West Midlands

'I applied to the scheme as a way to showcase the results derived from the research project that I have been heavily involved in over the last 2 years. I am passionate about service improvement and cardiology-related research. Therefore, the opportunity to present it to a general medical audience was one that I could not miss.'

Lecture title: Extending the reach of expert amyloidosis care: a feasibility study exploring the staged implementation of a UK amyloidosis network

Introduction

A heightened awareness of amyloidosis fuelled by novel therapies and improved diagnostic techniques has led to an exponential increase in diagnosis of transthyretin amyloid cardiomyopathy (ATTR-CM). In response to this, the Midlands Amyloidosis Service (MAS) was launched in 2019 to provide timely diagnosis, remote multidisciplinary expertise from the National Amyloidosis Centre (NAC), and early access to disease-modifying treatments.

Methods

Patients with suspected cardiac amyloidosis were referred to the MAS from the Midlands and seen in a consultant-led 'one-stop' multidisciplinary clinic. The diagnosis of ATTR-CM was established according to either validated non-biopsy criteria or histological confirmation of ATTR amyloid deposits with imaging evidence of amyloidosis.

Results

A total of 173 patients (75 years \pm 2 years; male 72%) were referred to the MAS between August 2019 and August 2021. The median time from referral to diagnosis was 43 days. By removing the necessity for all patients to travel to London, an average of 188 patient miles were saved. 80 patients (46%) were diagnosed with cardiac amyloid, 68 (39%) of whom had ATTR-CM.

Following Sanger TTR gene sequencing, 18% (18/68) were diagnosed as hereditary variant (ATTRv-CM). Overall, 15 patients received tafamidis under the Early Access to Medicine scheme, and 10 wild-type ATTRwt-CM patients were enrolled in phase III clinical trials of TTR-specific RNA interference or antisense oligonucleotide therapies.

Conclusions

The staged implementation of a UK amyloidosis network appears feasible and would ensure equity of access to specialised amyloidosis healthcare for the increasing numbers of elderly patients diagnosed with ATTR-CM.

'I benefited from presenting my research in front of a large audience and improve on my confidence in public speaking. The feedback which I have received following the lecture was encouraging and it has empowered me to publish the results.'

Dr Benjamin Lindsey

Organisation: Sheffield Teaching Hospitals NHS Foundation Trust

Grade: ST4

Specialty: Infectious diseases and medical virology

Region: Yorkshire



'I wanted the opportunity to develop my scientific presentation skills. I hoped to share my research findings with as wide an audience as possible.'

Lecture title: The use of whole genome sequencing to characterise hospital outbreaks of COVID-19

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has resulted in multiple hospital outbreaks, exposing healthcare workers and non-COVID-19 patients to SARS-CoV-2 infection. To safely continue routine and elective activities in hospitals during times of high SARS-CoV-2 incidence, it is important to discern factors that drive hospital-acquired infections. This greater understanding can be used to protect staff and patients, as well as informing further efforts to contain hospital outbreaks.

A retrospective Bayesian modelling study was used to reconstruct transmission chains among 2,181 patients and healthcare workers using combined viral genomic and epidemiological data at a large UK NHS trust between 1 March 2020 and 25 July 2020 (wave 1) and 30 November 2020 and 24 January 2021 (wave 2).

Staff-to-staff transmission was estimated to be the most frequent transmission type during wave 1. Patient-to-patient transmissions to become the predominant transmission type in wave 2. Over 50% of hospital-acquired infections were concentrated in 8/120 locations in wave 1 and 10/93 locations in wave 2. Approximately 40–50% of hospital-onset patient cases resulted in onward transmission compared with less than 4% of definite community-acquired cases.

Prevention and control measures introduced during the COVID-19 pandemic may have had a significant impact on reducing infections between healthcare workers, but were insufficient during wave 2 to prevent a high number of patient-to-patient transmissions. As hospital-acquired cases appeared to drive most transmissions, more frequent and rapid identification and isolation of these cases will be required to break hospital transmission chains in subsequent pandemic waves.

'It has helped me connect with a large group of physicians outside of my own medical specialty. It has given me greater confidence in public speaking and scientific presentation.'

 **RCP Player**

Your RCP – essential career stage events and resources

The Turner-Warwick lecturer scheme is led by the RCP regional team and is part of a wider programme of RCP activities designed to support physicians throughout their career stages.

Call the medical registrar

The role of medical registrar is often seen as a challenging one and the increased responsibility that can come with this position can cause a great deal of anxiety.

This popular digital conference aims to prepare trainees for the transition into the medical registrar role and equip you with the skills and knowledge to feel confident.

RCP Launchpad

Essential resources for new consultants, final-year registrars and SAS doctors. **RCP Launchpad** brings together information, tips and guidance into one resource to help this career stage grow into excellent educators, trainers and autonomous medical practitioners.

New consultants forums

Our programme of face-to-face and digital New consultants forums provide the opportunity to hear from local speakers on essential topics – from how to prepare a business case, medical leadership and survival tips for the new consultant.

Trainee poster competitions

The RCP offer a range of opportunities for trainees to profile their work at our programme of dedicated poster competitions. The format of these varies from virtual poster competitions to in-conference opportunities at our national conferences, Medicine and Med+. Please visit the RCP website for more information.



What's the biggest benefit of membership?

The RCP provides incredible resources – I particularly appreciate the webinars and the acute care toolkits are so useful too. There's so much here to help you.

Dr Latif Raiyan Rahman, RCP member since 2017



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