The Turner-Warwick lecturer scheme
2020 yearbook

#RCPTurnerWarwick
Foreword

It gives me enormous pleasure to introduce the yearbook for our 2020 cohort of Turner-Warwick lecturers.

This flagship scheme is in its second year and celebrates the life and achievements of Professor Dame Margaret Turner-Warwick, the Royal College of Physicians’ (RCP’s) first female president.

Dame Margaret was a leading thoracic physician who played a major role in transforming respiratory medicine. She was also a mentor and support to many trainees throughout her career and in her role as president of the RCP.

Usually this scheme would provide a unique opportunity for trainees to present at one of our popular ‘Update in medicine’ conferences. However, due to COVID-19 and continuing social distancing restrictions, we celebrated the achievement of our winning lecturers a little differently this year.

From September to December, the 2020 Turner-Warwick scheme winners from each region/nation were announced online and the winners presented virtually on RCP Player.

Topics this year have included ‘Anticoagulation in palliative and end-of-life care’, ‘Influenza vs COVID-19 in secondary care: transmission, mortality and management’ and ‘Improving care for people living with frailty and chronic kidney disease’.

The 2020 Turner-Warwick lecturer scheme has showcased the excellent work our trainees have successfully delivered through extremely challenging times, and we wish them continued success and hope they stay involved with the RCP and continue to share their learning with us.

Professor Andrew Goddard
President, Royal College of Physicians
## Contents

(listed in alphabetical order of region/nation)

<table>
<thead>
<tr>
<th>Region</th>
<th>Lecturer</th>
<th>Institution/University</th>
<th>Presentation/Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>Dr Ben Warne</td>
<td>Cambridge University Hospitals</td>
<td>Influenza vs COVID-19 in secondary care: transmission, mortality and management</td>
</tr>
<tr>
<td>East Midlands</td>
<td>Dr Matthew Graham-Brown</td>
<td>University of Leicester</td>
<td>Phenotyping cardiovascular disease in end-stage kidney disease</td>
</tr>
<tr>
<td>Kent, Surrey and Sussex</td>
<td>Dr Emma Hadley</td>
<td>Royal Surrey County Hospital</td>
<td>Who cares for the carers? Improving junior doctor wellbeing and morale</td>
</tr>
<tr>
<td>London</td>
<td>Dr Jonathan Hudson</td>
<td>Guy’s &amp; St Thomas’ NHS Foundation Trust</td>
<td>Family planning in MDR-TB: Improving access to contraception through integration of family planning services into a multi-drug resistant tuberculosis (MDR-TB) treatment programme</td>
</tr>
<tr>
<td>London</td>
<td>Dr Rebecca D’Cruz</td>
<td>Guy’s &amp; St Thomas’ NHS Foundation Trust</td>
<td>Nasal high flow in chronic obstructive pulmonary disease – not just a lot of hot air</td>
</tr>
<tr>
<td>Mersey</td>
<td>Dr Kathryn Moss</td>
<td>Whiston Hospital</td>
<td>Anticoagulation in palliative and end-of-life care – development of a regional guideline</td>
</tr>
<tr>
<td>North Western</td>
<td>Dr Andrew Nixon</td>
<td>Manchester University NHS Foundation Trust</td>
<td>Improving care for people living with frailty and chronic kidney disease</td>
</tr>
<tr>
<td>Northern</td>
<td>Dr Nicholas Lane</td>
<td>Northumbria Healthcare NHS Trust and Newcastle University</td>
<td>Predicting outcome in exacerbations of chronic obstructive pulmonary disease (COPD) requiring assisted ventilation</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>Dr Claire Neill</td>
<td>Public Health Agency</td>
<td>Study of asymptomatic, pre-symptomatic and atypical presentation of COVID-19 in care homes</td>
</tr>
<tr>
<td>Oxford and Thames Valley</td>
<td>Dr Rob Hallifax</td>
<td>Oxford Centre for Respiratory Medicine</td>
<td>Modern management of primary spontaneous pneumothorax: update from clinical trials</td>
</tr>
<tr>
<td>South West</td>
<td>Dr Catherine Hyams</td>
<td>Southmead Hospital</td>
<td>Update on the old man’s friend: <em>Streptococcus pneumonia</em> pneumonia trends</td>
</tr>
<tr>
<td>Wessex</td>
<td>Dr Jonathan Hinton</td>
<td>University Hospital Southampton</td>
<td>The interpretation of troponin results outside the context of acute coronary syndromes</td>
</tr>
<tr>
<td>West Midlands</td>
<td>Dr Punith Kempegowda</td>
<td>University Hospitals Birmingham NHS Foundation Trust</td>
<td>SIMBA – an innovative simulation-based learning model changing the way we teach and learn medicine</td>
</tr>
<tr>
<td>Yorkshire</td>
<td>Dr Syazrah Salam</td>
<td>Sheffield Kidney Institute</td>
<td>Renal osteodystrophy and bone fragility – a diagnostic test study to replace bone biopsy</td>
</tr>
</tbody>
</table>
Seasonal influenza and COVID-19 are major causes of morbidity and mortality. However, their potential as hospital-acquired pathogens is poorly understood. The lecture summarised studies of influenza’s impact in a teaching hospital over three winters and how this has influenced our management of the COVID-19 pandemic, reviewing the evidence and controversies surrounding transmission events and interventions to manage infection.

Epidemiological investigations were conducted in parallel with genomic analyses of influenza and SARS-CoV-2 samples to determine transmission. Multiple networks were identified across inpatient wards and outpatient units, involving healthcare workers and care homes.

The records of 1,098 influenza patients were reviewed to determine risk factors for mortality. Multivariable logistic regression demonstrated that the odds of inpatient death were reduced by two-thirds in patients treated with oseltamivir. This was discussed in the context of novel antiviral therapies for COVID-19.

Five key interventions were introduced to tackle influenza: 1) enhanced patient isolation; 2) improved laboratory practices; 3) changes in antiviral prescribing; 4) comprehensive staff education; and 5) point-of-care testing.

Quality improvement and audit methodologies were used to demonstrate efficacy. Adapted approaches were used to manage COVID-19.

Better use of resources and the utilisation of rapid diagnostics have led to considerable improvement in influenza management, with a reduction in hospital-acquired infection (from 36% in 2016–17 to 17% in 2018–19) and inpatient mortality (from 9.7% to 3.6%). Key lessons have been learnt from influenza and the first wave of the COVID-19 pandemic. Responding to both diseases requires interdisciplinary engagement to better understand, manage and prevent transmission.

While the advent of COVID-19 presented the personal challenge of delivering a prestigious lecture remotely, the scheme enabled me to broaden the scope of my talk to include our latest understanding of the virus at an opportune point between waves of the pandemic. It has been a privilege to share the work of myself and my colleagues with such a diverse audience, especially on a disease that has affected us all, both professionally and personally.'
Dr Matthew Graham-Brown

Organisation: University of Leicester
Grade: ST6
Specialty: Renal medicine
Region: East Midlands

Having seen the success of the inaugural Turner-Warwick lecture series in 2019 and the platform it offered trainees to present their work, I was delighted to be selected to present my research as the East Midlands region 2020 regional lecturer. The opportunity to present to such a knowledgeable and diverse group is almost unique and broadens the reach and impact of the work undertaken.

Lecture title: Phenotyping cardiovascular disease in end-stage kidney disease

Cardiovascular disease (CVD) remains the leading cause of death for patients with end-stage kidney disease (ESKD). In this patient group, CVD-related morbidity and mortality is directly related to stereotyped pathological changes in cardiovascular structure and function, including left ventricular hypertrophy and dilatation, myocardial fibrosis and aortic stiffness, and development of sub-clinical and overt heart failure. Development of myocardial fibrosis is the strongest independent determinant of CVD-related outcomes, but until recently there has been no reliable way of quantitatively or qualitatively assessing this in patients with ESKD with traditional investigations as these patients cannot receive gadolinium-based contrast agents.

This talk detailed the pathogenesis and CVD in patients with advanced renal disease and outlined the work we have done to validate a number of novel cardiac MRI measures that can now comprehensively phenotype the most pertinent aspects of CVD in this patient group including a novel, non-contrast parametric mapping sequence for detection of myocardial fibrosis (native T1 mapping). The talk also described how these measures can be used for early identification of disease and to improve risk stratification, as well as how we have already used them in a range of randomised clinical trials to understand the effects of exercise during dialysis and extended hours, and nocturnal dialysis regimens on prognostically relevant measures of cardiovascular structure and function. Finally, the talk explained how these cardiac magnetic resonance (CMR) measures are being tested in models to improve CVD risk prediction and how they might potentially become assessment tools for renal transplant suitability.

Presenting the Turner-Warwick lecture for the East Midlands provided a platform to present my research to a much wider group of clinicians than would ordinarily be the case. The questions and feedback from the audience suggested many of attendees took learning points from the lecture and I was certainly challenged to think about my work from new and different perspectives from a knowledgeable and diverse audience.
The project assessed the magnitude of poor wellbeing and morale of junior doctors (JD) locally, and identified and implemented simple, sustainable and affordable methods to improve the issues.

To assess the problem, questionnaires, JD forums and 1:1 discussions were conducted. National publications related to NHS staff wellbeing were reviewed, and wellbeing support models at other organisations appraised. The results led to the identification of four main areas that required improvement: the doctors’ mess, access to bike storage and changing facilities, wellbeing services and generation of a no-blame culture; along with strategies to address these areas.

The quality improvement project (QIP) has resulted in the approval and planned relocation of the JD mess, renovations to staff changing rooms and bike storage facilities, trust-wide implementation of GREATix, development of a trust Wellbeing Agenda and Wellbeing Committee, employment of a unique pastoral support lead for JDs, creation of a near-peer mentor scheme, and re-introduction of Schwartz Rounds. The QIP is an example of the revolutionary transformation of attitudes towards staff wellbeing. The concepts and strategies outlined should be used to formulate a gold-standard approach to JD wellbeing.

The award and the opportunity to deliver a lecture provided me with a platform to discuss and spread awareness of the ongoing NHS staff wellbeing and morale issues, as well as deliver our solutions to the RCP audience that can be replicated at other trusts and organisations.’

Lecture title: Who cares for the carers? Improving junior doctor wellbeing and morale

A consultant that I worked for informed me about the Turner-Warwick lecturer scheme and encouraged me, along with my educational supervisor, to submit my project.’
I applied as I thought the Turner-Warwick lecturer scheme would provide a great platform to share widely the issues related to multi-drug resistant TB and help me develop my ability to present my work to a wider audience.

Lecture title: Family planning in MDR-TB: Improving access to contraception through integration of family planning services into a multi-drug resistant tuberculosis (MDR-TB) treatment programme

MDR-TB is a global health priority that has been of particular concern in rural South Africa. Pregnancy during MDR-TB treatment significantly increases the risk of maternal and neonatal morbidity.

The World Health Organization (WHO) guideline for MDR-TB recommends a reliable contraceptive method, for all women on treatment. In addition, the new WHO MDR-TB treatment regimen includes bedaquiline, a drug with unknown teratogenicity.

At the time of the project, the South African national treatment programme suggests that all women seeking to start bedaquiline must be on a reliable contraceptive to be eligible for the drug.

Our quality improvement project aimed to integrate family planning services into a rural MDR-TB treatment programme in South Africa to try and reduce the risk of pregnancy while on MDR-TB treatment and improve access to bedaquiline.

To achieve this aim, contraceptive use and pregnancy rates were audited in all female patients aged 13–50 years initiated on our MDR-TB treatment programme in 2016. We then implemented an intervention consisting of procurement of depot-medroxyprogesterone acetate (DMPA) for the MDR-TB unit and training of specialist MDR-TB nurses in administration of DMPA. The audit cycle was repeated for all female patients aged 13–50 years initiated on the programme in January to October 2017 (post-intervention).

The proportion of women on injectable contraceptives by the time of MDR-TB treatment initiation increased significantly in the post-intervention cohort (77.4% vs 23.9%, p<0.001).

By integrating contraceptive services into our MDR-TB programme we significantly increased contraceptive uptake, protecting women from the obstetric risks associated with pregnancy during MDR-TB treatment and maximising their eligibility for bedaquiline therapy.

It has been useful to develop a presentation for a wider audience and reflect on how I want to communicate important messages about my work.
Delivering a Turner-Warwick lecture was a unique opportunity to showcase my research to an informed and engaged audience. It also encouraged me to consider how to describe specialist concepts in respiratory physiology and COPD to the wider medical community in an accessible and clinically valuable form, which will help me disseminate my work in the future.'

Dr Rebecca D’Cruz

Organisation: Guy’s & St Thomas’ NHS Foundation Trust
Grade: ST5
Specialty: Respiratory medicine
Region: London

Dame Turner-Warwick, the first president of the British Thoracic Society and first female president of the RCP, was a legend among chest physicians. Her extraordinary determination and ability to excel despite the many challenges she faced as a pioneering female clinical academic undoubtedly inspired me to apply for this prestigious commemorative award.’

Lecture title: Nasal high flow in chronic obstructive pulmonary disease – not just a lot of hot air

Acute exacerbation of COPD (AECOPD) is the second most common cause of emergency hospitalisation in the UK, and 25% of patients are readmitted within 30 days of discharge despite optimised medical therapy. Nasal high flow (NHF) is increasingly utilised by acute medicine and respiratory physicians, particularly in the management of AECOPD.

The first part of this lecture outlined the pathophysiology of AECOPD and physiological effects of NHF on the respiratory system, including improved secretion clearance, dead space washout and pulmonary mechanics, and summarised current evidence-based applications of NHF in acute and chronic respiratory failure.

The second part of the lecture reported preliminary results from a mixed-methods feasibility randomised control trial, which evaluated clinical, patient-reported and physiological effects of home NHF and usual medical care compared with usual care alone following hospitalisation with AECOPD (ISRCTN15949009). Patients hospitalised with AECOPD receive weekly home visits for 30 days post-discharge. To date, 20 patients have been recruited, 17 have completed the study (mean±SEM: age, 69.4±1.3 years, 41% female, body mass index 22.6±1.2kg/m², forced expiratory volume in 1 second 31.6±3.3% predicted). Interim analyses indicate that NHF is associated with a 0.45-fold risk of 30-day readmission/re-exacerbation (OR 0.27; 95% CI 0.04 to 2.00). Between admission and day 30, both groups had improved symptom and health-related quality of life scores (CAT, CCQ, MDP), p<0.001. Inspiratory capacity improved in the NHF group only (p=0.05). At interview, patients reported that NHF-aided sputum clearance and ability to perform activities of daily living, however, had prolonged setup times.

In conclusion, NHF produces a range of beneficial physiological effects on the respiratory system. Clinical trials support its application in specific clinical settings and patient selection remains key. Preliminary results indicate that home NHF following severe exacerbation of COPD is a feasible and acceptable intervention that has potential to improve clinical and physiological outcomes.

CAT = COPD assessment test; CCQ = clinical COPD questionnaire; MDP = multi-dimensional dyspnoea scale; OR = odds ratio; SEM = standard error of the mean
Dr Kathryn Moss

Organisation: Whiston Hospital
Grade: ST7
Specialty: Haematology
Region: Mersey

The Turner-Warwick lecturer scheme allowed me to bring the work of our group to a wider audience.

Lecture title: Anticoagulation in palliative and end-of-life care – development of a regional guideline

This lecture described the development of a regional guideline on the use of anticoagulation in palliative and end-of-life care. Our aim was that this would improve the quality of care for people with life-limiting illness, based on the most up-to-date evidence available.

In order to write the guideline, we performed a supra-regional audit and a comprehensive literature review, the results of which were presented in this lecture.

We found the majority of evidence is in the setting of cancer-associated thrombosis (CAT). There are now more options available to treat patients with CAT, which can add an additional level of complexity when making individualised patient decisions. In contrast, evidence for the use of anticoagulation in the last days and hours of life remains limited.

From recent years, trials on the use of direct oral anticoagulants (DOACs) in patients with CAT support consideration of the use of edoxaban or rivaroxaban for therapeutic anticoagulation. Edoxaban and rivaroxaban have both been found to be non-inferior to low molecular weight heparin in terms of venous thromboembolism (VTE) recurrence, but do have an increased rate of bleeding. On subgroup analysis, bleeding complications were particularly seen in patients with gastrointestinal malignancy.

A supra-regional audit assessed current practice as well as healthcare professionals’ confidence in the use of anticoagulation in palliative care. This highlighted that the evidence from recent trials had not yet been translated into changes in patient management. Our guideline uses this up-to-date evidence to support healthcare professionals’ decisions in this setting.
Dr Andrew Nixon

Organisation: Manchester University NHS Foundation Trust
Grade: ST6
Specialty: Renal medicine and general internal medicine
Region: North Western

I applied for the Turner-Warwick lecturer scheme as it was an opportunity to highlight the need to improve the care we offer people living with frailty and chronic disease. I also wanted to share practical and measurable approaches that services can implement to achieve this aim.

Lecture title: Improving care for people living with frailty and chronic kidney disease

This lecture explored the concept of frailty, outlined its relevance for renal medicine and discussed approaches that aim to improve care for people living with frailty and chronic kidney disease (CKD).

Previous studies have demonstrated that frailty is associated with falls, hospitalisation and mortality risk in CKD. However, little is published on outcomes such as health-related quality of life (HRQOL) and symptom burden, which are a priority for this group of patients. Two studies evaluating the association between frailty and patient-reported outcomes in CKD were discussed. Frailty was associated with worse HRQOL, with exhaustion being the most important frailty component contributing to HRQOL. Frailty was also associated with both high symptom burden and a distinct symptom experience. These studies demonstrate the need to identify and offer a holistic assessment to people living with frailty and CKD. Only by doing so can targeted management strategies be implemented that improve important patient-reported outcomes.

Several concepts of frailty have been proposed from which a variety of screening methods have been derived and validated in the general older population. A study evaluating the diagnostic accuracy of frailty screening methods in people living with CKD was discussed, and practical, clinically applicable frailty screening tools proposed.

The Turner-Warwick lecturer scheme provided me an opportunity to share my passion for improving the care we offer vulnerable people. I hope that it may lead to collaborations with others within the region that share this passion.
Dame Margaret Turner-Warwick and the trainee lecturer scheme

Dame Margaret Turner-Warwick was an internationally regarded respiratory physician who played a fundamental role in the development of modern respiratory medicine and had many remarkable achievements. In her medical and research career, she published over 200 papers and several books and received several honours. In 1989, she was elected as the first female president of the RCP, 471 years after it was founded.

The beginning of the Turner-Warwick lecturer scheme

Although the care of patients was her primary consideration, Dame Turner-Warwick was committed to supporting trainees throughout her career and presidency. She was an excellent mentor and she helped launch the careers of many of the next generation of respiratory researchers.

It’s because of this dedication that in 2019 the RCP Turner-Warwick lecturer scheme for trainees was launched in her name.

Now in its second year, the Turner-Warwick lecturers provide a platform for trainees across the UK to showcase the work they’re passionate about and demonstrate their ongoing, significant contribution to healthcare.

The Turner-Warwick lectures go virtual

Dame Turner-Warwick’s presidency of the RCP did not fall at an easy time for physicians. There were major NHS reforms under prime minister Margaret Thatcher, of which Dame Turner-Warwick was constructively critical. To address a looming workforce crisis in the NHS, Dame Turner-Warwick created what is now the Medical Workforce Unit to collect detailed and reliable data on the workforce and workload to use in pressing for expansion of the consultant workforce.

Now in 2020, the greatest challenge to the NHS is upon us with a workforce crisis in its own right; it’s possible to see connections between then and today.

Though our in-person lectures had to be cancelled this year, going virtual made it possible to shine a light on the brilliant work of trainees more visibly than ever – in true Dame Turner-Warwick style.

The Turner-Warwick lecture series on RCP Player gave our trainee lecturers a podium that extended further into the depth and breadth of healthcare than previously experienced through this scheme. Geographical barriers were broken using the virtual platform and each of our members and fellows had the opportunity to attend, not only their local trainee lecturer’s talk but any talk across the UK.

This year’s Turner-Warwick lecturers succeeded in showcasing their truest passions in healthcare while working to overcome unprecedented and multifaceted challenges. Dame Turner-Warwick would be so proud to see what today’s trainee physicians and her showcasing scheme are bringing to the forefront of healthcare discussion.
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This year’s Turner-Warwick lecturers succeeded in showcasing their truest passions in healthcare while working to overcome unprecedented and multifaceted challenges.
Dr Nicholas Lane

Organisation: Northumbria Healthcare NHS Trust and Newcastle University
Grade: ST7
Specialty: Respiratory medicine
Nation: Northern

The Turner-Warwick lecturer scheme was a fantastic opportunity to present my research to a broad physician audience. To do so in the name of the first female president of the RCP and a world-renowned respiratory physician was a real honour.’

Lecture title: Predicting outcome in exacerbations of chronic obstructive pulmonary disease (COPD) requiring assisted ventilation

COPD exacerbations account for over 141,000 hospitalisations annually in the UK, and over 20% are complicated by acute hypercapnic respiratory failure (AHRF). In such cases, non-invasive ventilation (NIV) substantially reduces mortality but only 50% of patients presenting with AHRF receive NIV. Decisions are usually made by non-specialists, with substantial variation between units. Clinicians’ prognostic pessimism may partially explain underuse. The NIV Outcome (NIVO) study aimed to develop a simple prognostic tool for inpatient mortality in this population.

Retrospective derivation (489 patients) used multivariate regression to identify independent mortality predictors and created a model. Prospective validation (733 patients across 10 NHS trusts) assessed model performance. Monthly quality of life (QoL) questionnaires and mortality were tracked for 1 year following discharge. Inpatient mortality was 20.1% and 90-day mortality was 32.2%.

The final NIVO score comprised extended Medical Research Council Dyspnoea Scale (eMRCD), acidaemia occurring >12 hours after admission, atrial fibrillation, chest X-ray consolidation, Glasgow coma scale score ≤14 and pH <7.25. Stepwise increase in inpatient mortality was observed, with a c-statistic of 0.83 in derivation and 0.79 in validation cohorts. The NIVO score significantly outperformed pre-identified comparator scores (APACHE-II, CAPS, Confalonieri risk chart).

Pre-discharge QoL scores showed substantial symptom burden. QoL peaked 2 months after discharge and did not clinically significantly deteriorate subsequently. 94.3% of patients would accept NIV again.

Using six simple indices, strong prediction of mortality was achieved. Importantly, QoL remains stable over the year following discharge. Potential applications of the NIVO score include facilitating objective prognostic discussions with patients and families, informing level of care decisions, and challenging prognostic pessimism.

Being selected to present the Northern Turner-Warwick lecture was a surprise and privilege. It has enabled me to discuss the findings of my research to a much wider group of physicians than I may have been otherwise able to, and I am proud to have had the opportunity to do so with the RCP.’
SARS-CoV-2 poses significant challenges to care homes. Transmission may be widespread without appropriate, rapid containment measures. Residents may be vulnerable to infection, and as with other viral illnesses, they may not present with typical symptoms.

Between 6–30 April 2020, care homes reporting recent cases of COVID-19 were recruited. Testing was offered to all residents and staff in the home. Descriptive analyses were conducted on SPSS, with Chi-squared ($\chi^2$) tests comparing categorical data. 388 SARS-CoV2 tests were completed from five care homes (245 residents, 143 staff); 97 (25%) were positive (87 residents and 10 staff). Overall, 36% (n=87) of residents tested were positive and 7% (n=10) of staff. 35% (n=30) of residents and 50% (n=5) of staff were asymptomatic despite testing positive. By 7 days, 40% (n=14) of all asymptomatic positives remained asymptomatic. Of those who developed symptoms, 69% (n=57) reported at least one typical symptom of cough, fever or shortness of breath ($\chi^2$ 42.962; p<0.001). While 13% (n=11) experienced atypical symptoms only ($\chi^2$ 3.856; p=0.05), 46% (n=38) experienced at least one atypical symptom ($\chi^2$ 19.418; p<0.001).

In the resident cohort, an acute deterioration with no other cause was found in 37% (n=28) of those testing positive ($\chi^2$ 8.313; p=0.004). Mortality was also significant in 31% (n=27) of residents ($\chi^2$ 55.108; p<0.001). Staff members reported more of a range of symptoms, with 25% (n=2) experiencing anosmia.

Findings suggest individuals with SARS-CoV-2 may be asymptomatic, or present with a range of atypical symptoms. This highlights that only testing symptomatic residents and staff, particularly those meeting the case definition for COVID-19, may not identify everyone with the virus. This study informed policy changes to care home testing in Northern Ireland.

I was delighted to be able to present my research to a regional audience via this platform, and to use the opportunity to tell people more about public health and epidemiology, in the context of the COVID-19 pandemic.

This experience has been really uplifting in the midst of the current pandemic. I feel honoured to have been invited to speak at this prestigious event, and the experience this has given me has been invaluable.

Lecture title: Study of asymptomatic, pre-symptomatic and atypical presentation of COVID-19 in care homes

Dr Claire Neill

Organisation: Public Health Agency
Grade: ST4
Specialty: Public health medicine
Nation: Northern Ireland
Primary spontaneous pneumothorax (PSP) occurs in otherwise healthy young patients. Optimal management is not defined and often results in prolonged hospitalisation. There have been two recent large randomised controlled trials:

1) The Randomised Ambulatory Management of Primary Pneumothorax (RAMPP) trial (my trial) compared ambulatory treatment with Rocket Pleural Vent to standard care. 1

Over 3 years, 236 patients were randomised. At 30 days, median hospitalisation was significantly shorter in those randomised to ambulatory treatment (median 0 days, IQR 3) compared with those who received standard care (median 4 days, IQR 8) (p<0.0001; median difference 2 days (95% CI 1–3)). Patients who had ambulatory treatment had fewer pleural procedures, but serious adverse events were higher due to hospital re-admission.

2) An Australian randomised trial of conservative vs standard management of patients with PSP regardless of size of pneumothorax. 2 This trial recruited 316 patients over 6 years and showed that the pneumothorax was just as likely to resolve on chest X-ray by 8 weeks with conservative management. They also reported lower adverse events and fewer pneumothorax recurrences in the conservative group. However, the pain and breathlessness scores in this trial (1 out of 10) were much lower than in the RAMPP trial (4 out of 10).

In conclusion, ambulatory management of PSP significantly reduced duration of hospitalisation, including re-admissions, in the first 30 days, but at the expense of increased adverse events. Wholly conservative management of pneumothorax is also an option regardless of size on X-ray, particularly in those patients with lower symptom burden. These trials challenge the current paradigm of inpatient management of pneumothorax, and allow meaningful discussion with patients about their treatment options.

Lecture title: Modern management of primary spontaneous pneumothorax: update from clinical trials

It was a great honour to be the Turner-Warwick lecturer and give this talk. I really enjoyed answering the questions from the panel and the audience (even though it was virtual due to the COVID-19 pandemic).
Dr Catherine Hyams

Organisation: Southmead Hospital  
Grade: ST5  
Specialty: Respiratory medicine  
Region: South West

The Turner-Warwick lectures were a fantastic opportunity for me to present my research findings to a physician audience. It was a privilege to be able to present respiratory research in a lecture series dedicated to Dame Turner-Warwick.

Lecture title: Update on the old man’s friend: *Streptococcus pneumoniae* pneumonia trends

The lecture described recent changes in *Streptococcus pneumoniae* causing adult pneumonia, how the disease phenotype is changing and possible consequences for healthcare delivery. Despite polysaccharide vaccination of elderly / at-risk groups and recent introduction of universal paediatric 7- and 13-valent-conjugate vaccines (2006, 2010 respectively) with known population-wide indirect effects, pneumococcus remains the leading cause of adult pneumonia. Yet, little evidence has emerged on recent trends in incidence, aetiology and clinical disease severity in adults.

In a retrospective cohort analysis of 2,114 hospitalised patients between 2006–17 with confirmed pneumococcal infection (positive sterile site cultures and/or urinary antigen test), we investigated patient characteristics associated with adverse outcomes. As expected, progressive serotype shift towards non-PCV7-serotypes occurred throughout this period, with shift towards non-PCV13-serotypes from 2010 (resulting in 92% pneumonia post-PCV13). However, there was persistence of vaccine-serotype 3.

Hospital admissions attributable to pneumococcus increased progressively year on year (p<0.05). Elderly patients were most affected, however the rise wasn’t entirely explained by trends in age distribution or comorbidities and, surprisingly, less-severe pneumonia emerged following PCV13 introduction. CURB65-scores and complication rates decreased, in particular acute renal failure and pleural effusion. All-cause inpatient mortality rates decreased (28% pre-PCV13, 15% post-PCV13), with significant improvements in 30-day and 1-year survival post-PCV13 in elderly patients (p<0.01).

With ageing populations and case numbers increasing, more non-conjugate-vaccine serotypes are causing disease while pneumonia severity may be decreasing, perhaps because these serotypes are less aggressive. As more vaccines targeting adult respiratory infections approach licensure, we plan prospective evaluation of disease burden to inform future policy on improved prevention, diagnosis and management.

The Turner-Warwick lecture was a wonderful opportunity to present my research findings relevant to a broad range of physicians. The experience allowed me to build my confidence in delivering lectures and provided networking opportunities with potential future collaborators.
Dr Alexandra Phillips

Organisation: Cardiff and Vale University Health Board
Grade: IMT 1
Specialty: Internal medicine training
Nation: Wales

The Turner-Warwick scheme was a fantastic opportunity to share my passion for medical education with a broad and distinguished medical audience. I hoped to contribute my experience of implementing local innovation in medical education to inspire similar schemes across the country.

Lecture title: Using simulated medical on-calls to enhance preparation for foundation training

This lecture described the design and implementation of a high-fidelity simulated on-call to prepare final year medical students for foundation training.

Foundation training is invariably a steep learning curve for new graduates, with the on-call shift being a particular source of anxiety. Doctors on-call require competence in clinical reasoning, prescribing and emergency care – areas in which newly qualified doctors report feeling underprepared. This project enabled students to independently, yet safely, undertake a simulated 2-hour medical on-call to develop these skills.

The sessions began with an individualised handover. Students then undertook tasks around the hospital while simultaneously receiving bleeps with new tasks. Patient notes were accessed on smartphones using a QR code located on the relevant ward, and students prescribed and documented on paper for subsequent use during debriefing. Stations included high-fidelity simulation of an unwell patient and face-to-face communication with a patient wanting to self-discharge. The students handed over to the ‘night team’ before participating in an extensive debrief.

The initiative received excellent feedback from students, described as being ‘exceptional’ and ‘the closest to understanding the role of an F1 that I have come in medical school’. A written task designed to assess prioritisation skills also showed a significant improvement in clinical reasoning.

In conclusion, this ongoing programme represents a unique and effective way to equip final-year medical students with the skills required of a safe and efficient foundation doctor. Similar initiatives can be implemented with minimal resources, although the availability of advanced simulation technology can help to maximise fidelity.

Winning the Turner-Warwick lecture for Wales has been a highlight of my career so far. It was a privilege to present my work alongside that of so many incredible physicians, researchers and educators.
Dr Jonathan Hinton

Organisation: University Hospital Southampton
Grade: ST6
Specialty: Cardiology
Nation: Wessex

I thought this would be a great opportunity to disseminate our research. Elevated high-sensitivity troponin results are being seen in a range of different scenarios and interpreting these results is essential to a broad range of clinicians.’

Lecture title: The interpretation of troponin results outside the context of acute coronary syndromes

My lecture explored the use and interpretation of high-sensitivity cardiac troponin (hs-cTn) levels outside the context of acute coronary syndromes (ACS). Our previous work\(^1\) demonstrated that 1 in 20 hospital patients had a hs-cTn concentration above the upper limit of normal (ULN). This highlights the problem with using the ULN as a diagnostic threshold across all populations. The interpretation of these tests is therefore crucial to all specialties, in particular the acute medical team.

My 2-year research period specifically focused on assessing the role of hs-cTn concentrations outside the context of ACS across two studies. The first study demonstrated that, in nearly 6,000 emergency presentations, the hs-cTn concentration was independently associated with 30-day mortality regardless of whether there was a clinical indication for the test. The second study, of 1,612 critically ill patients, showed that these patients frequently had hs-cTn concentrations above the ULN and that these concentrations were associated with illness severity. However, hs-cTn concentration was still independently associated with mortality.

Our work highlights the weakness of using a hs-cTn concentration as the sole arbiter of ACS. As such, physicians need to have a thorough understanding of the factors associated with hs-cTn concentrations in order to appropriately interpret these results.

Furthermore, our results indicate that these assays may have a wider prognostic role outside the context of ACS and could be considered biomarkers of future risk across a wide spectrum of different presentations.

I was delighted to be selected for the Turner-Warwick lecturer scheme. It has both helped me improve my presentation skills and also given me a platform to share the exciting developments in this field.’

\(^1\) Mariathas M et al. True 99th centile of high sensitivity cardiac troponin for hospital patients: prospective, observational cohort study. BMJ 2019;364:k729
As Turner-Warwick lecturer, I was able to increase SIMBA and CoMICs profile on national and international platforms. Hopefully, my lecture inspired many more of my colleagues and medical students to become creative to not only survive during this pandemic, but to thrive and achieve success in it.

Dr Punith Kempegowda

Organisation: University Hospitals Birmingham NHS Foundation Trust
Grade: ST6
Specialty: Diabetes, endocrinology and general internal medicine
Region: West Midlands

Having achieved resounding overall success in increasing self-confidence among peers and medical students, I was keen to share the workings of the model so this can be replicated everywhere, bringing back the passion and increasing recruitment in medicine. And what better stage to do this than the 500-year strong organisation of the Royal College of Physicians.

Lecture title: SIMBA – an innovative simulation-based learning model changing the way we teach and learn medicine

This lecture described an innovative, simulation-based approach to case-based learning in medical education and training that could have transformative impact. Health Education England identified strengths of simulation-based learning (SBL) to enhance UK medical training in a recent systematic review. SBL helps us move away from the apprentice-styled ‘see one, do one, teach one’ model. However, most simulation models are expensive, limited in capacity and opportunity. Further, to the best of our knowledge, there is no SBL for elective care which forms an integral part of medicine.

Simulation via Instant Messaging-Birmingham Advance (SIMBA) is an innovative SBL in which healthcare professionals (HCPs) interact one-to-one with moderators to solve real-life cases through WhatsApp. SIMBA compresses a patient’s entire medical journey into a 30-minute simulation. Cases are prepared for SIMBA in fruitful interaction between specialist consultants and students, the latter who will then subsequently act as moderators for the session. So far, we have conducted four SIMBA sessions in which participants reported a significant improvement in their confidence to manage simulated cases (pituitary (p=0.0002), diabetes (p=0.0006), adrenal (p<0.0001), inflammatory bowel disease (p=0.0001)). SIMBA also provided a unique learning experience for medical students and foundation year doctors while they participate as moderators.

The success of two SIMBA sessions held in May and June 2020 during the COVID-19 pandemic proves the model’s resilience across adversities. Although SIMBA was designed for diabetes and endocrinology, its success in gastroenterology proves its generic adaptability. Therefore, SIMBA is a useful SBL model for any medical specialty with elective care with no significant cost involved.

As Turner-Warwick lecturer, I was able to increase SIMBA and CoMICs profile on national and international platforms. Hopefully, my lecture inspired many more of my colleagues and medical students to become creative to not only survive during this pandemic, but to thrive and achieve success in it.
It was a great honour to deliver the Turner-Warwick lecture which enabled me to raise the profile of my research work among colleagues in Yorkshire and beyond! I feel empowered to raise awareness about the challenges in managing bone disease in CKD patients.'
About the Turner-Warwick lecturer scheme

The Turner-Warwick lecturer scheme was created in 2019 by Dr Adrian Jennings (director of CPD for the Federation of the Royal Colleges of Physicians of the UK) and Professor Andrew Goddard (president of the RCP) following the success of the Quincentennial lecturer scheme, which was set up to involve trainees in celebrating the RCP’s 500th anniversary.

“It was clear early on that the [Quincentennial lecturer] scheme was successful, with excellent lectures and a number of heartwarming stories, so we adapted the scheme, maintaining the principles of the Quincentennial scheme and introduced the Turner-Warwick lectures for 2019.’

– Dr Adrian Jennings

2021 Turner-Warwick lectures

Applications are now open for the 2021 Turner-Warwick lecturer scheme.

Please visit www.rcplondon.ac.uk/education-practice/funding-awards/turner-warwick-lectures for full details.
The RCP’s regional network contains 18 nations/regions supported by nine regional offices. The RCP regional offices coordinate the Turner-Warwick lecturer scheme in their respective regions in consultation with the regional advisers and Dr Adrian Jennings.

**RCP nations and regions**

Eastern
East Midlands (North)
East Midlands (South)
Kent, Surrey and Sussex
London (Central and North East)
London (North West)
London (South)
Mersey
North Western

Northern
Northern Ireland
Oxford and Thames Valley
Peninsula
Severn
Wessex
Wales/Cymru
West Midlands
Yorkshire

[Diagram of RCP network showing regions]
For further information

Visit: www.rcplondon.ac.uk/education-practice/funding-awards/turner-warwick-lectures

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#RCPTurnerWarwick