Defining Healthcare Research and Innovation in Cumbria

The Learning Gateway • University of Cumbria • 15th May 2025

Introduction and welcome

It is our pleasure to welcome you to Ascent Cumbria 2025—a conference celebrating the transformative power of research and innovation in healthcare. Hosted by North Cumbria Integrated Care NHS Foundation Trust (NCIC) this event is designed to inspire and challenge our thinking about how we deliver healthcare.

We passionately believe that groundbreaking, globally impactful research can be driven right here in Cumbria. We will showcase work from within our Trust that is delivering tangible improvements in patient care. We also look forward – today we will meet future research partners who will help us to explore the latest developments in artificial intelligence, 3D printing, digital health, and big data, technologies that are not only shaping the future of healthcare worldwide but are equally relevant here in our community.

Ascent Cumbria embodies the spirit of collaboration. Today we bring together local partners in community and mental healthcare, the Pears Cumbria School of Medicine, the University of Cumbria, and the Cumberland Council Health Department Research Collaborative, alongside esteemed national partners including the National Institute for Health Research and Imperial College London, with a shared mission: to redefine healthcare research in our region. This collaboration is not only strengthening our local capacity to do research but will also integrate Cumbria into the broader landscape of healthcare innovation and research.

Thank you for coming. We invite you to engage fully with the presentations, discussions, and networking opportunities throughout this programme. Your participation today and in the coming months and years will be key to driving the change we all wish to see—from pioneering research to tangible improvements in patient outcomes.

Finally, we are sincerely grateful to the support of Lyn Simpson, Adrian Clements and the wider leadership of the trust who share our belief in the transformative impact that research can have on healthcare in Cumbria. Dave Dagnan, Barbara Cooper and their amazing team who have flown the flag for research at NCIC for many years. Brian Webster-Henderson, Zulf Ali, and their colleagues at the University of Cumbria who are open and generous collaborators. Jonathan Weber and Sophie Day who have been instrumental in shaping todays programme and will be similarly influential as Co-Directors of the Pears Cumbria School of Medicine's Research Hub. Finally, today would not have been possible without the generous support of the NCIC Charity.

Enjoy the symposium!

Kathie Wong and Chris Rao

Joint Clinical Leads for Research and Innovation at NCIC, on behalf of the organising committee of Ascent Cumbria 2025.

Table of Contents

Main Auditorium

Welcome and Introduction

8:45 AM – 9:15 AM
Coffee & Registration

9:15 AM – 9:30 AM
Welcome & Introduction
Speakers: Dr Adrian Clements, Executive Medical Director NCIC and Prof Brian Webster-Henderson, Deputy Vice Chancellor, University of Cumbria

9:30 AM – 09:40 AM
Introductory Message from Lord Ara Darzi, Director of the Institute of Global Health Innovation, Imperial

---

Session 1: Cumbrian Roots, Global Impact: Transforming Medicine through Education and Research

Chairs: Prof Brian Webster-Henderson and Prof Mary Morrell

9:40 AM – 9:55 AM
The Pears Cumbria School of Medicine
Speakers: Prof Mary Morrell, Head of The Pears Cumbria School of Medicine

09:55 AM – 10:10 AM
Research and Innovation at the University of Cumbria
Speaker: Prof Zulfiqur Ali, Pro Vice Chancellor, Research and Knowledge Exchange, University of Cumbria

10:10 AM – 10:30 AM
How to Train Clinical Academics
Speaker: Prof Waljit Dhillo, Professor of Endocrinology and Dean of the NIHR Academy

10:30 AM – 10:45 AM
Questions and Panel Discussion

10:45 AM – 11:15 AM
Break

Session 2: The Artificial Intelligence and Data-driven Future of Health

Chairs: Dr Geetanjali Verma and Mr Harry Tustin

11:15 AM – 11:35 AM
Artificial Intelligence in Healthcare
Speaker: Prof Brendan Delaney, Chair in Medical Informatics and Decision Making

11:35 AM – 11:55 AM
Clinical Applications of Optics
Speaker: Dr Akhil Kallepalli, Department of Bioengineering, University of Strathclyde

11:55 AM – 12:15 PM
Use of Real-World Data and Big Data Analytics
Speaker: Prof Alex Bottle, Professor of Medical Statistics, Imperial College London

12:15 PM – 12:30 PM
Panel Discussion

12:30 PM – 1:30 PM
Lunch & Networking

Session 3: Foundations for Excellence

Chairs: Prof Dave Dagnan, Dr Hadar Zaman and Prof Sophia Day

1:30 PM – 1:50 PM
The Pears Cumbria School of Medicine Research Hub
Speaker: Prof Jonathan Weber and Prof Sophia Day, Co-Directors of the Pears Cumbria School of Medicine Research Hub

1:50 PM – 2:10 PM
Training and Developing Research Capacity in Cumbria
Speaker: Prof Joy Duxbury, Director of Research and Knowledge Exchange, institute of Health, Cumbria University

2:10 PM – 2:30 PM
NIHR Research Development Network
Speaker: Morag Burton, Director or the NIHR Regional Research Delivery Network, North East and North Cumbria

2:30 PM – 2:45 PM
Panel Discussion

2:45 PM – 3:15 PM
Break

Session 4: Lights and Layers: Disruptive Tools in Clinical Innovation

Chairs: Mr Chris Rao and Dr Tim Donovan

3:15 PM – 3:35 PM
Small Place, Big Trial – CO-STAR: A Cumbrian Randomised Control Trial in Prostate Cancer
Speaker: Miss Kathie Wong, Consultant Urologist, NCIC

3:35 PM – 3:55 PM
3D Printing in Medicine
Speaker: Mr Harry Tustin, Consultant Ear, Nose and Throat Surgeon, NCIC

3:55 PM – 4:10 PM
Panel Discussion

4:10 PM – 4:30 PM
Research Prizes and Awards

4:30 PM – 4:45 PM
Conclusions & Closing Remarks
Speaker: Dr Adrian Clements, Executive Medical Director NCIC

Room LG 102

Afternoon Parallel Session 1: Original Abstracts

Chairs: Mr Ioannis Michalakis and Mr Ludger Barthelmes

Please arrive 10 minutes prior to the session start time

1:30 PM Ali Ahmed

Investigating Imaging Trends in Diverticular Disease: A Single-Cycle Audit of Emergency and Surgical Teams

1:36 PM Hussain Alsaroo

Colorectal Cancer Despite Negative FIT: A Retrospective Analysis of Diagnostic Delay and Disease Patterns

1:42 PM Mubashar Azeem

Prompt actions for appropriate care for ICE laboratory and radiology results

1:48 PM Samuel Bloomer

Thromboprophylaxis in Superficial Endovenous Treatment: A Randomised Controlled Trial at Cumberland Infirmary (Part of a Multicentre Study Led by Imperial College London)

1:54 PM Denis Burke

Using Advice and Guidance (A&G) to inform pathway redesign

2:00 PM Denis Burke

At Risk but unseen. Piloting a system to identify cirrhotic patients at risk of Hepatocellular Carcinoma (HCC)

2:06 PM Denis Burke

Intelligent LFTs (iLFTs), improving detection, improving assessment, improving referrals and improving care.

2:12 PM Muhammad Umair Butt

Aberrant Right Hepatic Artery: A Common Anomaly Requiring Awareness during Laparoscopic Cholecystectomy

2:18 PM Muhammad Umair Butt

Blood culture and sensitivity for surgical patients with Suspected sepsis or Bacteraemia

2:24 PM Siddharth Rajah

A cost consequence analysis of the management of acute ureteric stones in rural Cumbria from a patient and NHS perspective.

2:30 PM Abdelrahman Swidan

The PACIFIC trial - NCIC Local results

2:36 PM Adrian Chan

An analysis and improvement in the use of patient controlled analgesia (PCA)

2:42 PM Charli Chmylowskyj

Acute urinary toxicity results following prostate SABR – real world data

2:48 PM Chidi Ollawa

Ultrasound Presentation of Epithelioid Malignant Mesothelioma of the Tunica Vaginalis

2:54 PM Mohammed El Bahnasawi

The LapAR augmented reality training device in surgical simulation: a multi-center pilot study

3:00 PM Ifeanyichukwu Emmanuel Ihedoro

Use of STONE score for predicting the outcomes of lithotripsy: a narrative review

3:06 PM Shafayat Mohammad Imteaz

A multicentre randomised controlled trial to assess the clinical and cost effectiveness of Dialkylcarbamoylchloride (DACC) coated post-operative dressings versus standard care in the prevention of Surgical Site Infection in clean or clean-contaminated, vascular surgery

3:12 PM Peter Sudworth

A Novel, Low-Cost Solution for High-Fidelity 3D Printed Temporal Bone Models to Enhance Mastoid Surgery Training

Room LG 202

Afternoon Parallel Session 2: Original Abstracts

Chairs: Dr Yannick Yangue and Mr Chris Rao

Please arrive 10 minutes prior to the session start time

01:30 PM Yik Nok Bryan Lee and Minjae (Jade) Jeong

How to fill a glass half empty: discordance of staff perception, academic interest and excellence reporting pattern at North Cumbria Integrated Care (NCIC)

01:36 PM Neha Grace Korah

More to it than meets the eye: colour codes for reusable hats ?

01:42 PM Neya Krisna Pawan

Financial and eCO2 savings by changing tor reusable gowns for UCLan medical students on placement in North Cumbria Integrated Care (NCIC) – no drop in the ocean

01:48 PM Neha Grace Korah

Medical students' views on sustainable active travel – a baseline survey

01:54 PM Kim Ostridge

Enhancing Patient Involvement in Stroke Rehabilitation Service Design by Providing Physiotherapy Student Research Placements in a Rural and Coastal NHS Trust.

02:00 PM Kim Ostridge

Implementing Mental Practice in a NHS Stroke Unit: A Patient Experience Review.

02:06 PM Laura May Cairns

Developing an easy to access training programme to better support people with post stroke psychological needs. A quality improvement project.

02:12 PM Joanne Howard

An evaluation of the North Cumbria Stroke Discharge Support Service

02:18 PM Richard McLellan

Work conducted by the Oral and Maxillofacial Surgery Department - NCIC

02:24 PM Jack Messenger

What role can physiotherapists play in enhancing patient adherence to physiotherapy treatment of lower back pain in adults: A scoping-review.

02:30 PM Caroline Millett-Spicer

Reducing FY1 Anxiety and Facilitating Standardised Care Out of Hours: A Mobile Intervention.

02:36 PM Nour Nakeshbandi

Optimising Amoxicillin Prescribing: Enhancing Stewardship and Reducing Overuse

02:42 PM Ruchi Nasa

Adopting molecular classification for endometrial carcinomas; A feasibility study in a DGH setting.

02:48 PM Joanne Goodfellow / Rachael Edgar

Delivering Stroke Information Sessions to Third Sector Activity and Exercise Providers across North Cumbria: a SQuIRe project

02:54 PM Michael Brown

How clean is clean - Disposable versus Protocolled Laundered versus Home Washed Hats.

03:00 PM Neya Krisna Pawan

Carbon emission and financial savings of changing to reusable hats for UCLan medical students – no drop in the ocean

03:06 PM Jayalakshmy Payippattu Leelamma

An audit of reporting of thyroid cytology specimens and their correlation with thyroid histology.

03:12 PM Julie Clough

The development of a psychological risk management model and its impact on orthognathic (jaw surgery) patients and staff

Professor Zulfiqur Ali

Zulfiqur Ali received a BSc (Hons) Applied Chemistry and a PhD in Instrumentation and Analytical Science from the University of Manchester. He is Pro-Vice Chancellor for Research and Knowledge Exchange at the University of Cumbria. His research focuses on microfabrication, microfluidics, transducer development, and AI for sensor data.

Ludger Barthelmes MD FRCSI

I studied medicine at Heinrich Heine University, Düsseldorf, and Faculté de Médecine in Nantes, France. I completed basic surgical training in Bangor, Wales, and higher surgical training in Cardiff, Wales, before moving to North Cumbria in 2010. I am a consultant surgeon with a specialist interest in thyroid and parathyroid surgery.

Professor Alex Bottle

My work measures and explain variations in quality of healthcare, predict risk, model patient pathways and evaluate health policy and guidelines. Among my external activities, I had various roles in the Bristol, Shipman and Mid Staffordshire inquiries and more recently led a review of Ireland's National Audit for Hospital Mortality.

Morag Burton

Morag Burton is the Network Director of NIHR North East and North Cumbria Regional Research Delivery Network (RRDN). She has worked for the NIHR since 2014 in a variety of different roles. In her role as Regional Director, she sits on the National RDN Board and has also co-led the CRN/ RDN Primary Care Strategy for the past 3 years. The RRDN came into being in April 2024, building on the successes of the previous Clinical Research Network over the past 10 years. It is hosted by The Newcastle Upon Tyne Hospitals NHS Foundation Trust with a regional footprint across the whole of the North East and North Cumbria, with our Integrated Care System and many other regional infrastructures e.g. NIHR Applied Research Collaboration (ARC), Health Innovation Network (HIN).

Morag studied Psychology at University of Birmingham, graduating in 1998. She then went on to practise as a Psychologist in the prison system and in community mental health in dual disorders, before studying a masters in Research and Experimental Science in 2006. She moved away from her clinical work to undertake research at Bristol University in Primary Care into Depression and post-natal depression before moving into research roles in a number of NHS Foundation Trusts.

Dr Adrian Clements

Executive Medical Director NCIC

I joined the Board in January 2022 as Executive Medical Director.

I am the Trust's Responsible Officer and Caldicott Guardian.

I am an experienced clinical leader and in my career to date I have held roles including:

- Executive Medical Director South Tees Hospitals 2016-2021
- Medical Director Friarage Hospital 2017-2021
- Deputy Chief Executive South Tees Hospitals 2017-2020
- Regional College Advisor and Council member Royal College of Emergency Medicine 2010-2016
- Training program Director for Quality Assurance Acute Care Specialties HENE 2010-2016
- Clinical Director Emergency Medicine 2006-2016 South Tees Hospitals
- Consultant in Emergency Medicine to date

Professor Sophie Day

Prof Sophie Day (BA, MA, PhD) is an anthropologist of health with expertise in personalised medicine, infectious disease (e.g. HIV and other sexually transmitted infections), public involvement in translational research and social understandings of health. She is a former Head of Department of Anthropology at Goldsmiths, University of London and co-founder of the Imperial NIHR BRC-funded Patient Experience Research Centre (PERC) in the School of Public Health, Imperial College London .

Professor Brendan Delaney

I am a leading exponent internationally of the "Learning Health System' (LHS) concept. Although my initial training in research was in heath technology assessment, real-world (pragmatic) clinical trials and clinical research in Family Medicine, since 2003 I have worked in the area of Clinical Informatics, being appointed to a Chair in Medical Informatics at Imperial in 2015 and elected one of the first 100 founding fellows of the new UK Faculty of Clinical Informatics in 2017 (Now Health and Social Care Faculty of the British Computer Society). I have had wide exposure to European and US clinical informatics through workshops and symposia.

Professor Waljit Dhillo

Waljit Dhillo FMedSci is a Professor in Endocrinology & Metabolism, Consultant Endocrinologist and an NIHR Senior Investigator. He holds the following leadership roles:

(i) Dean of the NIHR Academy.

(ii) NIHR Scientific Director for Research Capacity and Capabilities

(iii) Head of Division of Diabetes, Endocrinology and Metabolism at Imperial College London.

Professor Joy Duxbury

Joy Duxbury is a mental health nurse, professor of mental health and director of research for the Institute of Health at the University of Cumbria. She has worked on numerous funded projects pertaining to mental health including the exploration of service user perspectives and the implementation of organizational approaches.

Dr Akhil Kallepalli

Dr Akhil Kallepalli leads the Kallepalli Lab based at the Department of Biomedical Engineering at the University of Strathclyde, with a focus on clinical translation of classical and quantum optics and working across physics and biomedical engineering. Ongoing projects include blood perfusion monitoring, cerebral blood flow measurement and advanced microscopy.

Skanda Koppula

Skanda Koppula is a researcher at Google DeepMind and PhD candidate at UCL, focusing on computer vision and natural language understanding. He has worked with and led machine learning teams at Google, NVIDIA, MIT, and ETH Zürich. Skanda's research spans machine learning theory and applications (healthcare, environmental sciences, manufacturing).

Professor Mary Morrell

Professor Morrell is Head of the Pears Cumbria School of Medicine, and Professor of Sleep and Respiratory Physiology at Imperial College. Her research has impacted guidelines for sleep apnoea treatment. She has served on the American Thoracic Society Board of Directors, as a Physiological Society Trustee and British Sleep Society President.

Mr Chris Rao FRCS(Gen) PhD

I am a Consultant Colorectal Surgeon at NCIC and Co-Lead for Research and Innovation. I have been fortunate to be able to do research alongside my clinical work. It is great to see how research can shape policy, redefine treatment paradigms, and drive meaningful improvements in patient care.

Harry Tustin

I'm and ear, nose and throat consultant in Cumbria specialising in ear problems. I also have a passion for design innovation. I've developed a bone conduction hearing aid to treat problems with the conduction of sound to the inner ear. This has the potential to revolutionise the treatment of the most common cause of childhood deafness.

Geetanjali Verma

Consultant Anaesthetist and Clinical Director of Anaesthetics at NCIC

Since completing CESR and becoming a consultant, I have been actively involved in national and international research projects in Anaesthetics and currently leads anaesthetic research at NCIC. I have a particular interest in perioperative medicine and have also authored a book on airway management. I am committed to advancing clinical practice through research, innovation, and education, and am pleased to chair this session at the research symposium.

Professor Jonathan Weber

Prof Jonathan Weber CBE FMedSci is co-Director of the Pears Cumbria School of Medicine Research Hub at the Institute of Health at the University of Cumbria (UoC). He is a former Dean of the Faculty of Medicine at Imperial College London and consultant physician in Communicable Diseases at St Mary's Hospital London, specialising in care and research on HIV/AIDS. The Research Hub is funded by the Imperial NIHR BRC to build clinical research at NCIC, in partnership with the UoC, Imperial and other partners.

Professor Brian Webster-Henderson OBE

Brian is Deputy Vice Chancellor at the University of Cumbria and has overall executive leadership for the university's academic provision. A Professor of Nursing Brian is both an adult nurse and mental health nurse. He has worked in several universities across England and Scotland as well as Chairing the Council of Deans for Health, representing 108 universities across the UK for 6 years.

Kathie Wong

Kathie Wong, Consultant Urologist and Research Co-Lead at NCIC, is Chief Investigator of an NIHR-funded prostate cancer trial and PI on multiple NIHR studies. She is passionate about integrating research into clinical care and advancing collaborative, high-quality research across Cumbria.

Dr Yannick Yangue

Dr Yannick Yangue is a Consultant Radiologist with specialist interests in urological oncological imaging and neuroradiology. He has been based at the Cumberland Infirmary since 2023, where he is actively involved in a national clinical research team. He holds a fellowship in neuroradiology and has co-authored a publication in this field.

Hadar Zaman

Hadar has recently started as the new Chief Pharmacist for NCIC and prior to this was Deputy Director of Pharmacy at Bradford Teaching Hospitals. Hadar has also worked in academia and led the School of Pharmacy at the University of Bradford. Hadar is research active and has published in the field of patient safety and is currently working with colleagues in the Yorkshire and Humber Research Collaborative exploring the quality of Structured Medication Reviews in Primary Care.

Original Abstracts

Ali Ahmed

Investigating Imaging Trends in Diverticular Disease: A Single-Cycle Audit of Emergency and Surgical Teams

Background: Diverticular disease is a prevalent gastrointestinal condition, with acute diverticulitis being a common presentation in emergency settings. NICE (2019) guidelines recommend CT imaging as the first-line investigation for suspected diverticulitis, while international guidelines such as those from the American Gastroenterological Association (AGA, 2020) and American Society of Colon and Rectal Surgeons (ASCRS, 2021) provide recommendations for the role of endoscopy in post-acute assessment. However, adherence to these guidelines in clinical practice remains variable. This audit aimed to evaluate compliance with national standards for CT imaging in suspected diverticulitis within the Emergency Medicine and Emergency General Surgical teams of a UK NHS Trust. A secondary objective was to assess endoscopic referral patterns against international best practice.

Methods: A retrospective audit was conducted over a six-month period, reviewing 152 patients presenting with diverticular disease. Quantitative data were collected from ICE, PACS, Symphony, and the Endoscopy Management System (EMS), while qualitative data were obtained from clinical records. Adherence to NICE (2019) guidelines for CT imaging was assessed, alongside an evaluation of endoscopic referrals within six months pre- or post-presentation, using guidance from AGA and ASCRS.

Results: CT Imaging Adherence:

Emergency Department: 86.5% compliance with NICE guidelines. • Surgical Team: 74% compliance. • Overall, Trust Adherence: 83.56%.

Endoscopy Referral Patterns: 82% of patients were appropriately referred within six months of presentation, aligning with international guidelines.

Conclusions: While overall compliance with NICE imaging guidelines was high, adherence was lower in the surgical team compared to the Emergency Department. Endoscopic referral rates were generally appropriate but lacked a clear UK-based standard. Findings highlight the need for targeted education, guideline reinforcement, and pathway standardisation to improve adherence. A second-cycle audit following quality improvement interventions will assess the impact of these measures.

Hussain Alsaroo

Colorectal Cancer Despite Negative FIT: A Retrospective Analysis of Diagnostic Delay and Disease Patterns

Background: Colorectal cancer (CRC) remains a major global health concern. The faecal immunochemical test (FIT) is widely employed as a non-invasive triage tool for low-risk symptomatic patients, with strong sensitivity and negative predictive value. However, a small but meaningful proportion of CRC cases may still occur despite a negative FIT result. This retrospective audit evaluates the rate, characteristics, and diagnostic context of FIT-negative CRC cases at our institution, aiming to identify patterns and improve patient safety in the diagnostic pathway.

Methods: A retrospective review of all CRC cases diagnosed between 2023 and 2024 was conducted. FIT status prior to diagnosis was recorded and cross-referenced with demographic, clinical, and pathological data, including referral pathways and treatment modalities. Time from FIT to diagnosis was calculated for FIT-negative cases.

Results: Of 581 CRC cases diagnosed over the study period, 53 patients (9.1%) had a negative FIT prior to diagnosis. The average age was 72.4 years, with a slight female predominance. The sigmoid colon was the most common tumour site (24.5%), followed by the rectum (17.0%). Histologically, adenocarcinoma was the predominant type (62.3%). Nearly half of the FIT-negative cases (47.2%) lacked formal staging data. A majority (72%) underwent curative treatment, while 28% received palliative care. Most were diagnosed via urgent suspected cancer referrals (45.3%) or consultant upgrades (32.1%), with a smaller proportion through routine or screening routes. The average delay from FIT to diagnosis was 287 days, with significant variability by cancer site.

Conclusions: Approximately 1 in 11 CRC cases occurred despite a negative FIT result. This highlights the need for improved vigilance and possibly supplementary assessment tools in symptomatic patients with negative FIT, especially among older adults. Enhancing diagnostic pathways and addressing FIT limitations may reduce delays and improve outcomes.

Mubahsar Azeem

"Better safe than sorry" -Optimising ICE Results Reviewing

Background: Laboratory tests results and radiology reports are crucially important in the care of patients. Sometimes medical teams are too busy to miss reviewing critical results, which may affect patient care adversely. There is an evidence of serious incidents due to delayed results review leading to delayed action.

Aim: The aim of this Service Quality Improvement Project (SQIP) is to improve the regular and timely review of blood results and radiological finding, mark file and take prompt action.

Methods:

- As first step a team was established consisting of two consultants and three junior doctors and an ACP.
- Information was collected about causes of delay in reviewing ICE results and reports.
- 145 patients in different wards of West Cumberland Hospital were randomly selected.
- Data gathering of total test results received, filed and actioned, any complications, concerns or complaints raised.
- Initiating awareness campaign in the trust about importance of filing results and taking appropriate action.
- Suggesting filing of results as mandatory induction training for all healthcare workers printing out materials and posting in different parts of the Hospital
- Presentation at various forums.

Conclusions:

- Before implementing change 75%, results were filed and 25% were missed.
- After ICE filing campaign, 83 % results were filed and 17% were missed.
- The percentage of filing within 3 hours of receiving results improved from 30% to 60%.

Samuel Bloomer

Thromboprophylaxis in Superficial Endovenous Treatment: A Randomised Controlled Trial at Cumberland Infirmary (Part of a Multicentre Study Led by Imperial College London)

Background: Endovascular treatment is a NICE recommended first-line approach for varicose veins. However, venous thromboembolism (VTE), including deep vein thrombosis (DVT) and pulmonary embolism, remains a potential complication, with reported rates up to 3.4%. VTE carries significant morbidity and mortality in the UK. Currently, there is a lack of validated VTE risk assessment tools specific to post-endovenous patients and no clear consensus on indications for pharmacological thromboprophylaxis. This randomised controlled trial aims to determine if different pharmacological thromboprophylaxis strategies reduce VTE events in individuals undergoing superficial endovenous treatment.

Methods: This assessor-blind, randomised controlled trial is being conducted at NCIC as part of a larger multicentre study. Eligible participants are adults (>18 years) scheduled for endovenous intervention (radiofrequency ablation, foam sclerotherapy) under local anaesthetic. Participants are randomised to one of three groups: compression alone (control), compression plus single dose of LMWH, or compression plus single dose of LMWH with seven days of rivaroxaban. The primary outcome is VTE occurrence, assessed at day seven, 21-28 days (lower limb venous duplex scan for DVT), and 90 days.

Results: Preliminary data from 50 recruited participants (20 male, 30 female) out of 269 screened over a specific period indicate a DVT rate of 6% (3/50) at day 21-28. Two DVTs occurred in the compression-alone group and one in the compression plus single-dose LMWH. No DVTs were detected in the group receiving rivaroxaban. Recruitment has been slower than anticipated, primarily due to challenges in including weekend treatment patients and inconsistent participant identification by clinicians.

Conclusions: Early data from this ongoing trial suggest a potential benefit of a seven-day rivaroxaban regimen in preventing DVT following superficial endovenous treatment. Addressing recruitment challenges through increased awareness and clinician engagement is crucial for the trial's successful completion and to provide robust evidence for optimal thromboprophylaxis strategies in this patient population.

Denis Burke

Using Advice and Guidance (A&G) to inform pathway redesign

Background: Advice and Guidance (A&G) facilitates communication between primary and secondary care, enabling GPs to seek specialist input without direct referrals. This quality improvement project details the benefits of A&G audit to inform pathway redesign.

Methods: A baseline audit of consecutive A&G referrals was undertaken to identify themes and performance. Targeted pathway redesign for the most common A&G requests was developed, supported by Community Health Pathway(CHP), an education programme, re-audit and feedback to teams

Results: GI A&G response has consistently performed well and provides good to excellent advice as rated by GP colleagues (GI =82% vs Trust 82.3%), and OP avoidance continues at 35.5% (Trust 34.7%). In the preliminary review "abnormal LFTs" was the highest scoring request at 66%. 50% of which advice enabled management in community. At this time OP avoidance was running at >50%. Implementation of a new pathway included the introduction of an "abnormal LFT" decision support tool via intelligent LFTs. Re-audit following introduction of the new pathway showed that LFT A&G requests had fallen to 28% of total requests. "Abnormal LFTs" receives the greatest number of page hits in CHP.

Conclusions: A&G demand can inform areas that require additional education and advice and amendments to traditional pathways of management. We were able to reduce the number of A&G requests for the most commonly requested advice, "abnormal LFT" by enabling alternative pathways, leading to improved management in the community and avoidance of unnecessary referrals.

Denis Burke

At Risk but unseen. Piloting a system to identify cirrhotic patients at risk of Hepatocellular Carcinoma (HCC)

Background: Hepatocellular carcinoma (HCC) is the fastest-rising cancer-related death in the UK. Despite well-established risk factors, surveillance remains inconsistent and inefficient. Current systems for HCC surveillance rely on fragmented processes, often opportunistically during clinic visits, paper-based requests for US surveillance (USS), methods that are labor-intensive, prone to administrative delays, and leave high-risk patients vulnerable to being lost to follow-up. HCC surveillance consists of a 6-monthly abdominal ultrasound + AFP. Five-year survival rates are markedly higher when diagnosed earlier. The lack of OP diagnostic coding complicates efforts to ensure appropriate identification and surveillance adherence. This project, aims to improve HCC surveillance by addressing patient identification, follow-up, and data management.

Methods: Development of a structured "at-risk" system to standardize patient classification. Based on Microsoft.net ASP web pages, using a SQL database and data collectors that scan the Trust's document store (CHUB+). APIs (Application Program Interfaces) from SharePoint software search for chosen terms. Streamlined requesting by introducing one off USS and AFP ICE requests.

Results: 8500 documents were found that related to potential "at risk" cases. Review and classification via the bespoke system identified 1001Cirrhosis, 28 HCC. 28 patients declined USS, 32 DNA>2, USS not indicated because of co-morbidities 122. 818 USS was indicated but only 505 were on a surveillance list. 23 cases of cirrhosis were not known to us.

Conclusions: “At risk” patients are now identified and a database created and updated. RTT forms now clarify USS status. Request systems for USS and AFP streamlined to one off requests in ICE. The next phase is to integrate an RTT digital form, document scanning safety nets to capture new cases and integrate automated recall systems. This initiative aims to enhance efficiency, reduce administrative burden, and ensure that high-risk patients receive timely HCC surveillance.

Denis Burke

Intelligent LFTs (iLFTs), improving detection, improving assessment, improving referrals and improving care.

Background: Abnormal LFTs are common but < 5% relate to liver disease. Management of LFTs has led to unnecessary referral/investigation, delays in assessment/management. We report the first implementation in England of iLFTs.

Methods: We introduced a decision support tool to aid in the management of abnormal LFTs. If liver disease suspected iLFT (requested via ICE) with information regarding alcohol, BMI and metabolic syndrome. If abnormal a cascade of investigations and risk assessment of fibrosis is calculated, a guidance report indicates potential diagnoses and management.

Results: There has been excellent engagement and uptake of iLFTs with positive feedback (94.7% iLFT helpful), requests increased from 1060 to 2057 (45.7%:54.3 female:male) since introduction in 2020. The initial biochemical assessment is automatically reported within 24 hours including a fibrosis risk (Fib4) and guidance on management within the community or need for referral. The majority of reports recommended management within primary care. On average 1/3 were identified as having abnormal markers for fibrosis (potentially cirrhosis). Previously this required referral to secondary care but now primary care can clarify status when iLFT recommends direct to test fibroscan, further reducing referrals. Within the first year 44 cases were identified with abnormal iron studies, 2 identified as genetic haemochromatosis, 3 new cases of HepB, 5 HepC, 7 coeliac and 18 AMA, cases that might otherwise have not been identified. Reports recommended 25% non urgent, and only 3% acute GI referral. A&G requests for abnormal LFTs reduced from 66% to 28%.

Conclusions: By streamlining processes, and better use of simple diagnostics and risk assessments we can automatically triage those that can be managed safely in the community and reduce unnecessary referrals. Moreover, the time for a patient to receive informed advice is significantly reduced and previously undetected potentially significant liver problems are identified earlier.

Muhammad Umair Butt

Aberrant Right Hepatic Artery: A Common Anomaly Requiring Awareness during Laparoscopic Cholecystectomy

Background: The aberrant right hepatic artery (ARHA) is a significant anatomical variation in hepatic vasculature, found in approximately 10-20% of the population. Laparoscopic Cholecystectomy is one of the indexed procedure required for certification in General Surgery, Here we present 4 cases of laparoscopic cholecystectomy where we encountered ARHA to signify the awareness that it is not uncommon to encounter these variations intra operatively.

Methods: There were 4 cases over 3 months operated by ST3 trainees under direct supervision, anomalies were detected intraoperatively after high suspicions of abnormally large dilated vessel crossing cystic duct were made. Careful dissection of ARHA till liver insertion were done along with clipping of high origin of cystic duct. The rest of surgery and recovery was uneventful. Post-surgery CT Angiogram were organized to delineate anatomy of vessel for future reference.

Results: This arterial anomaly originates from the superior mesenteric artery rather than the common hepatic artery, deviating from the typical arterial supply of the liver. We encountered 2 cases where the artery was having its course medially and 2 cases from inferior aspect of the hilum. Clinically, the presence of an ARHA holds considerable importance, especially in hepatobiliary and pancreatic surgeries, liver transplantations, and interventional radiology procedures, where unrecognized variants can lead to complications such as ischemia, haemorrhage, and postoperative liver dysfunction.

Conclusions: ARHA represents a vital anatomical variant with implications interventional outcomes. Recognition of ARHA through imaging and meticulous operative planning is essential for minimizing intraoperative complications and ensuring optimal patient outcomes in hepatobiliary care.

Muhammad Umair Butt

Blood culture and sensitivity for surgical patients with suspected sepsis/bacteraemia

Background: Suspected sepsis is a common presentation in general surgery. Abdominal infection is the second most common source of sepsis. The causes of infection source can be abscesses, biliary infection, perforation of intra-abdominal hollow viscus and bowel ischaemia with bacterial translocation etc

Methods: 49 Patients were studied, Information was taken through Symphony and case notes were requested from the Medical Records Department, Data was recorded on Excel spreadsheet and analysed with formulating a Clinical Audit report that was finalised and uploaded onto Ulysses

Results: Out of the 49 patients with NEWS of 5 and higher certain parameters were looked into that included: 1. Lactate 2. Blood Culture 3. Diagnosis 4. Antibiotic First Dose. Among the 19 Blood Cultures that were done 5 were positive. (Obstruction, Cholangitis, Perforation and 2 for Cholecystitis). Among the patients that never got their First Antibiotic Dose (3) all of them had Small Bowel Obstructions secondary to adhesions

Conclusions: Blood C&S ratio of not being done for patients with NEWS of 5 and higher remains quite high.

Laura May Cairns

AN EVALUATION OF THE NORTH CUMBRIA STROKE DISCHARGE AND SUPPORT SERVICE

Background: The North Cumbria Community Stroke Discharge and Support Team was set up to provide in-reach to inpatient wards, facilitate hospital discharges, provide 6-month stroke reviews, provide training, consultations and advice to community care teams and review complex care packages. A survey carried out with inpatient staff prior to service launch identified that staff report facing difficulties when planning discharge to care homes for stroke patients. This research aimed to evaluate the effectiveness of the team approximately half way through the pilot period.

Methods: A data collection tool used to record data relating to KPIs for all patients referred to the service, alongside other data such as non KPI outcome measures and length of time in service. Two surveys were developed to gather feedback from those working within the service and from those working outside of the service/in inpatient settings. Patient feedback questions were also developed.

Results: 100% of six month stroke reviews completed by the team fell within the recommended time frame. 3 teams and 12 individuals in wider services provided feedback about the service. - 69% agreed that the service has been effective at providing the care it intended to provide. - 81% agreed that the service had been beneficial. - 88% agreed that the service meets needs that are not met elsewhere and stroke patients have benefitted from the support provided by the service. - 75% agreed that the service has improved the support provided to stroke patients throughout/after discharge.

Conclusions: We are beginning to see positive trends in terms of the impact on length of stay and patient outcome measures. The service has carried out 6 month reviews within the expected timeframe with the majority carried out virtually. Key stakeholders have primarily provided positive feedback.

Laura May Cairns

DEVELOPING AN EASY TO ACCESS TRAINING PROGRAMME TO BETTER SUPPORT PEOPLE WITH POST STROKE PSYCHOLOGICAL NEEDS. A QUALITY IMPROVEMENT PROJECT.

Background: Post stroke depression is common but is under diagnosed and treated (Medeiros et al, 2020). Recent publications suggest more needs to be done to support the emotional wellbeing of patients recovering from stroke. While the access to timely psychological care remains patchy throughout the country, a need for an innovative approach is apparent through the training and development of other members of the workforce. While training is often delivered by psychological services, there remains sections that are harder to reach such as non-stroke specialist staff and staff who are unable to attend lengthy training programmes. A training package will be created that can be accessed by anyone supporting people after stroke including paid carers and family.

Methods: Initial data collection took the form of a survey sent to nursing homes to determine the needs of the staff when caring for stroke patients across a range of domains including psychological needs. This was refined to focus solely on psychological care including depression, anxiety and adjustment.

Results: The initial survey was sent to 65 nursing homes. When asked for the most important topics the training package could cover, depression, distress, adjustment, cognition and anxiety featured in the top 10 most important. The follow up survey was sent to non-stroke specialist care teams and these responses showed that people felt more confident to recognise psychological needs post stroke (mode = 7/10) than responding to them (mode = 5/10).

Conclusions: The outcome of the survey suggests there is an appetite for training to support non stroke specialist staff in supporting the wellbeing of their residents/clients after stroke. Further work will now be done with our identified pilot sites to develop the training to target the areas identified in the surveys and ensure a robust way to evaluate the package.

Adrian Chan

An analysis and improvement in the use of patient controlled analgesia (PCA)

Background:

- PCAs are used routinely in patients who are nil-by-mouth following operations for analgesia.
- At NCIC, we used 100ml PCA CADD cassettes with a selection of Morphine (£28.02 per cassette) or Fentanyl (£44.04 per cassette) as the drug.
- Looking into the supply chain revealed that there were 50ml cassettes available.
  A discussion with pain team also revealed that there was potential to reduce opiate usage in patients who may not require them.
- The opportunity to reduce drug and financial waste was identified.

Methods:

- The ward control drug destruction book was audited to identify the amount of patients who had more, or less than 50mls of the PCA cassette discarded.
  Post-operative patients were selected, on surgical wards (Hazel, Aspen, Maple A, B and Ward 1), over a 10 week period between 1/11/23 – 12/1/24

Results: 1

19/24 patients (79.2%) used <50ml from a morphine PCA cassette

- 28/43 patients (65.1%) patients used <50ml from a fentanyl PCA cassette

Conclusions:

- A plan was then made with pain team and we rolled out a switch of cassettes from 100ml to 50ml, with aid from medical engineering to reprogramme the PCA pump devices across the trust.
- This resulted in a predicted annual saving of £11383.88)ex VAT; a reduction in 18.41L(!) of drug volume wastage.
  The smaller volume of the cassettes also meant that it was less likely to be left to run simply because it wasn't empty, so it should lead to more timely reviews of patient's analgesia and use of more appropriate routes (eg Oral).
- It was acknowledged that certain patients who are unable to swallow for an extended period would use more cassettes.
- This also aligns with the NHS green plan. Although we were unable to attain exact carbon footprint data from the manufacturers this most likely to be a reduction in carbon footprint.

Charli Chmylowskyj

Acute urinary toxicity results following prostate SABR – real world data

Background: Radiotherapy is a curative treatment for localized prostate cancer. Advances in techniques have reduced treatment times from 7.5 weeks to 1 week using stereotactic ablative radiotherapy (SABR). Prostate SABR is expected to be NICE commissioned in 2025 but we have introduced this early locally.

One of the side-effects of SABR is acute worsening of urinary symptoms due to a higher dose of radiation. Up to 27% of patients experience moderate (G2 RTOG) side-effects in the first 12 weeks after radiotherapy. Management involves lifestyle measures and pharmacological interventions. Quality of life (QOL) is often reduced because these symptoms can be challenging to manage.

This study aims to systematically evaluate the prevalence, severity, and management of urinary symptoms to optimise QOL for patients receiving SABR.

Methods: Data on consecutive patients treated with prostate SABR in NCCC-North Cumbria is being collated from 2024-2025. Demographics, urinary symptoms and quality of life are collected at 3 time-points: baseline; 2 weeks and 2 months post treatment using the IPSS score. Eighteen patients have been included to date.

Results: Median age 72 years, (range 58-80). Median baseline IPSS score 4, (range 0-19, n=18). After 2 weeks of radiotherapy median IPSS score 1.5, (range 0-27, n=15) and after 2 months median IPSS 0, (range 0-5, n=15). 62.5% (10/16) of patients reported baseline quality of life score 0-2 (delighted – mostly satisfied), at 2 weeks 60% (6/10) scored 0-2 and 2 months post SABR this increased to 83% (5/6).

Conclusions: From current data, QOL and IPSS score seems to be maintained from baseline to post treatment and there was a trend to improved QOL 2 months after treatment, but numbers are small to date. The improvement may be explained by timely management of urinary symptoms prior to treatment and psychological impact of completing cancer treatment. Data capture for 50 patients is planned.

Julie Clough

The development of a psychological risk management model and its impact on orthognathic (jaw surgery) patients and staff

Background: Orthognathic teams can struggle to identify, understand and manage psychological challenges which may significantly affect patient suitability for, engagement in and satisfaction with orthognathic treatment. Larger orthodontic centres increasingly purchase psychological or psychiatric support to assess and manage these challenges but this is rarer in District General Hospital services. A Clinical Psychologist from the Physical Health & Rehabilitation Psychology Service was recruited by the NCIC orthognathic MDT to develop and evaluate a psychological risk management model and pathway to support their work.

Methods: One year of 0.2wte Clinical Psychology input to the orthognathic service was evaluated by retrospective anonymous electronic survey of consenting patients and clinic staff. Data were analysed using Thematic Analysis and used to develop a tiered model of psychological risk assessment and associated patient pathways.

Results: 80 patients aged 16-55 (mean 24.5yrs) were screened for psychological risk at 15 MDT clinics. 25% required further assessment by the Clinical Psychologist, of which one third required intensive support to engage in orthognathic treatment and one patient was psychologically unsuitable. 18% of patients provided feedback, identifying themes such as MDT compassion, accessibility and quality of psychological support and overall MDT clinic experience. 91% of staff provided feedback, highlighting the positive impact on patient decision making, assessment/reduction of risk, more holistic treatment options and staff support / satisfaction.

Conclusions: A tiered psychological risk model and patient pathway were developed based on this patient and staff feedback and used to further develop MDT working and orthognathic / orthodontic staff training.

Rachael Edgar

Delivering Stroke Information Sessions to Third Sector Activity and Exercise Providers across North Cumbria: a SQuIRe project

Background: Increased Physical Activity (PA) and community integration post Stroke is important. Interagency working and those with appropriate education and training in stroke and exercise should support this. In North Cumbria, the Early Supported Stroke Discharge Team (ESSDT) provide individualised exercise programmes for Stroke Survivors plus the opportunity to attend an eight-week exercise group. However, outside the exercise on referral scheme, there is little scope to refer into third sector services for ongoing PA. Our project aims were to: build links with community-based exercise facilities to support people with stroke to transition to ongoing PA, educate PA providers about Stroke, provide networking opportunity for those delivering PA in the wider community, and provide recognised training registered with the Stroke Specific Education Framework (SSEF).

Methods: We identified Providers using various methods including contacts on a list of third sector services, social media and poster dissemination. Scoping questionnaires completed by providers informed session content. Specialist Physiotherapists developed and delivered the training content across four localities in North Cumbria.

Results: Fifty-eight attendees improved their knowledge and confidence working with Stroke survivors by an average 3.6 points on a 1-10 rating scale. Attendees stated it was useful to hear Physiotherapists experiences as well as have time to Network with each other. Attendees felt that NHS services do not understand what they can offer.

Conclusions: Although preparation of content took longer than expected, we were able to deliver the sessions within budget. Attendees found the sessions beneficial and there was a subjective improvement in knowledge.There is now a comprehensive training package available for dissemination across the UK.

Mohammed El Bahnasawi

Background: There has been a significant change in the way that postgraduate education is delivered, particularly in skills training for surgical trainees. In line with national guidances in the United Kingdom, novel surgical training devices, particularly those utilizing advancing augmented reality (AR) technologies, are beginning to be implemented. This study aimed to provide evidence towards the validation of efficacy of a novel AR laparoscopic simulator, the LapARTM from Inovus Medical

Methods: This study combined a prospective cohort study with an extensive qualitative component. The trainees were orientated face to face and then given a LapARTM simulator to take home, where they were asked to perform ten appendectomies interspersed with applicable standardized procedural tasks. Objective performance metrics in procedure completion time and the distances travelled of standard surgical instruments were collected as primary outcome measures. Further metrics assessing the smoothness and acceleration of instrument movements were also gathered to gauge technical proficiency.

Results: 15 trainees and 2 consultants across 5 training sites were recruited to participate in the study. Findings show that by their final appendectomy procedure, the trainees' mean performance for time for completion of the procedure was 6.53 min (95%), reaching equivalence to that of the benchmarking consultant, 6.76 min (95%). Statistically significant improvements in time for procedure completion ($p = 0.001$) and surgical instrument distance travelled were found ($p = 0.043$) across the trainee's repeated procedures. Improvements in smoothness and acceleration of instrument use were also observed, but did not reach statistical significance.

Conclusions: This study demonstrates the LapARTM simulator has the potential to enhance surgical experience, offering surgical trainees a new format to learn techniques, hone laparoscopic skills and prove competency. This study provides further evidence highlighting the impact that augmented reality technologies are having on transforming surgical education by providing immersive, interactive environments that enhance the learning experience beyond traditional methods.

Ifeanyichukwu Emmanuel Ihedoro

USE OF S.T.O.N.E. SCORE FOR PREDICTING THE OUTCOMES OF LITHOTRIPSY: A NARRATIVE REVIEW

Background: Urinary stone disease is a common urological condition which affects individuals of different age groups around the world. Important surgical modalities for the treatment of upper urinary tract stones, include percutaneous nephrolithotripsy, ureteroscopy and shockwave lithotripsy. Several systems have been formulated to help predict outcomes of lithotripsy in patients with upper urinary tract stones, including the S.T.O.N.E scoring system, the Clinical Research of the Endourological Society nomogram, Guy's scoring system and Seoul National University Renal Stone Complexity. The aim of this review is to examine the S.T.O.N.E scoring system, its correlation with clinical outcomes and comparison with alternative scoring systems, ultimately assessing its importance in management of patients with upper urinary tract stones.

Methods: This narrative review gathered primary resources through PubMed, MEDLINE, and Google Scholar search with no date limit, and secondary resources by cross-referencing citations used in articles of interest. Only English papers were included.

Results: We present the utility of S.T.O.N.E score in prediction of outcomes and complications following lithotripsy in patients in upper urinary tract stones. Multiple papers have been published that show that the score has a high predictive value in determining the outcomes of lithotripsy. It is comparable to the other nephrolithometric scoring systems and can serve as a useful tool in patient management.

Conclusions: The S.T.O.N.E scoring system is an easy yet efficient tool in urological practice. Its utility can ultimately guide surgeons in pre-operative planning, patient counselling and standardized reporting of surgical outcomes.

Shafayat Mohammad Imteaz

A multicentre randomised controlled trial to assess the clinical and cost effectiveness of Dialkylcarbamoylchloride (DACC) coated post-operative dressings versus standard care in the prevention of Surgical Site Infection in clean or clean-contaminated, vascular surgery.

Background: Surgical Site Infections (SSIs) remain a significant cause of postoperative morbidity and healthcare costs, particularly in vascular surgery involving clean or clean-contaminated wounds. Dialkylcarbamoylchloride (DACC)-coated dressings have shown promise in reducing SSI incidence by physically binding bacteria through hydrophobic interactions, thereby reducing microbial load without promoting antimicrobial resistance.

Methods: The patients will be enrolled and randomly assigned in a 1:1 ratio to receive either DACC-coated dressings (Leukomed® Sorbact®) or standard postoperative dressings. The primary outcome is the incidence of SSIs within 30 days post-surgery, measured by CDC criteria or an ASEPSIS score ≥21. Secondary outcomes include SSI incidence at 90 days for implant patients, wound healing (ASEPSIS ≤10), quality of life (EQ-5D-3L and SF-36 v2), Bluebelle Wound Healing Questionnaire scores, time to return to normal activity/work, healthcare resource use, 30-day mortality, and mean carbon emissions related to treatment.

Results: In the initial pilot phase, 144 patients were enrolled to assess the comparative effectiveness of DACC-coated versus conventional dressings in clean or clean-contaminated cardiovascular surgery. Within 30 days postoperatively, the incidence of surgical site infections (SSIs) was 16.2% in the DACC group compared to 25.7% in the control group. Complete SSI outcome data were available for 82.6% of participants. Based on these findings, a sample size calculation determined that 287 patients per group would be required to detect a reduction in SSI rates from 25.7% to 16.2% or

lower, with 80% statistical power and a 5% significance level. Accounting for an anticipated 20% attrition rate, the total sample size for the main trial was set at 718 participants, with 359 allocated to each arm.

Conclusions: This study seeks to provide robust evidence regarding the efficacy of DACC-coated dressings in preventing SSIs and promoting cost-effective care in vascular surgery, with potential implications for standard postoperative practice.

Minjae (Jade) Jeong

How to fill a glass half empty: discordance of staff perception, academic interest and excellence reporting pattern at North Cumbria Integrated Care (NCIC)

Background

Incidence reporting is a well-established learning tool in health care settings to learn from adverse events and near misses. It is part of the undergraduate curriculum. Excellence reporting uses a similar approach with the focus on events, which have gone well. This is a comparison of both reporting systems at NCIC and in the literature.

Methods

Members of the Medical Staffing Committee (MSC) were asked for their perception of the importance of excellence reporting compared to incident reporting (less important – more important – equally important). We undertook two literature searches (Ovid Medline, EBSCO) using the Medical Subject Headings (MeSH) “NHS”, “National Health Service” or “health care”. We compared the number of publications of the search terms “excellence reporting” and “reporting excellence” with “incident reporting” and “reporting incident”. Lastly, we searched the Ulysses reporting software comparing the numbers of incident and excellence reports logged since 2020.

Results

14 of 17 staff members consider excellence reporting equally important as incident reports.

Only 10 % of publications on reporting systems in health care also capture excellence reporting.

	Excellence reporting	Incident reporting	Excellence / incident reporting Ratio of hits (_%)
Search terms	"Excellence Reporting" or "Reporting Excellence" and "NHS" or "National Health Service" or "Health Care"	"Incident Reporting" or "Reporting Incident" and "NHS" or "National Health Service" or "Health Care"	
Number of hits OVID MEDLINE 1946 - 2025	57	522	11 %
Number of hits EBSCO 1882 - 2025	79	885	9 %

Only 5 % of events logged on Ulysses are excellence reports (with an upward trend).

Year	Excellence reports N =	Incident reports N =	Excellence / incident report ratio (_ %)
2021	554	20157	2.7 %
2022	859	23565	3.6 %
2023	1081	23933	4.5 %
2024	1475	26907	5.4 %

Conclusion

Excellence reporting has now been included as part of induction for both undergraduate medical students and foundation doctors in surgery in anticipation of an enhanced upward trend of excellence reporting at NCIC.

Godfrey Kamai Katung

More to it than meets the eye: colour codes for reusable hats ?
A staff survey

Background: Before implementing reusable hats theatre staff were asked about their preference regarding colour codes matching particular nursing grades.

Methods and results: A survey was shared with theatre staff including doctors, nurses and allied health professionals enquiring about staff preferences. The survey included two questions with the option of providing a more detailed free-text answer (summary of questions and answers below).

	Yes	No	Unsure
I am familiar with the colour codes reflecting different grades of nursing and medical staff.			
Multiple choice reply N = 191	80 / 191 42 %	94 /191 49 %	17 / 191 9 %
Free text reply N = 38	7 / 38 18 %	29 / 38 76 %	2 / 38 5 %

	Yes	No	Unsure
Colour codes should continue or be implemented for reusable hats.			
Multiple choice reply N = 191	69 / 191 36 %	75 / 191 39 %	45 / 191 24 %
Free text reply N = 38	11 / 38 29 %	25 / 38 67 %	2 / 38 5 %

A small majority of staff was both not familiar with colour codes (49 % unfamiliar vs 42 % familiar with colour codes for particular nursing bands) and opposed to implementation of colour codes (39 % against colour codes vs 36 % in favour of colour codes.) Of those who filled in the free text box, they were more likely to express their unfamiliarity (76 % unfamiliar vs 15 % familiar with colour codes) and opposition to colour codes (67 % opposed to and 29 % in favour of colour codes).

Conclusions: A considerable proportion of staff are supportive of colour codes. The majority view, however, does not support this. Practical issues (reusable hat scheme based on minimal funding, help by volunteers and use of recycled textiles) would not have lent itself to implement colour codes for reusable hats in theatres.

Neha Grace Korah

Medical students' views on sustainable active travel – a baseline survey

Background + Methods: Sustainable transport and physical exercise are of undisputed benefit to both public and individual health. This is a snapshot survey and baseline assessment how likely future doctors align their personal travel choices with individual and public health advice based on a survey of peers of 15 year 3 UCLan medical students.

Results

	Yes	No
Car ownership	3	12
Cycle ownership	1	14

Frequency of cycling

Weekly	0
Monthly	1
Yearly	5
Several years ago	9

Reasons for not cycling

Unable to cycle	2
Lack of confidence on bicycle	1
Concern about safety + collision	2
Unpredictable weather	8
Other	2

Change of travel choice following information of global warming threat to civilization

No change in travel choice	9
More sustainable travel choice	6

Interest in participation in bike / public transport scheme to placements

Yes	4
No	4
Unsure	6

Conclusion: Active sustainable transport (cycling) is not a travel choice currently pursued by UCLan medical students. Recommendation of active sustainable transport (eg cycling) to patients to improve public and individual health does therefore not align with future doctors' travel choices. One third of students are open for a change to sustainable travel and could be targeted as early adaptors for a sustainable travel intervention.

Linwei Li

Structured medication reviews for patients with polypharmacy in primary care: a cross-sectional study in North West London, UK

Background: Polypharmacy, defined as taking at least five medications concurrently, is associated with increased risks of medication-related problems and adverse health outcomes (1–3). Medication reviews are recommended to address inappropriate polypharmacy (4). NHS England has required primary care networks (PCNs) to identify patients who would benefit from structured medication reviews (SMRs), including patients with polypharmacy (5).

There have been no quantitative studies investigating the implementation of SMR at a population level in England. This research aims to evaluate the prevalence and equity of SMR and medication reviews among patients with polypharmacy in primary care.

Methods: This is a cross-sectional study using integrated health and care records in North West London in 2022. The study population are adults registered with a GP in North West London and regularly prescribed at least five medicines or more. We quantified the prevalence of SMR and medication reviews among the study population by patient characteristics. We fitted logistic regression models for the receipt of at least one SMR, and for any kind of medication review, to investigate related demographic and socioeconomic factors.

Results: Among 167,482 adults with polypharmacy, 53.3% (89,220) received at least one medication review, while only 17.2% (28,741) received SMRs. Patients who were males, black, more affluent, and frailer, were more likely to receive medication reviews, while those who were males, less affluent, and frailer, were more likely to receive SMRs.

Conclusions: Although polypharmacy was common in Northwest London, relatively few eligible patients received medication reviews and SMRs. Different distributions of medication reviews and SMRs by demographic and socioeconomic characteristics may indicate inequities in the provision of these services. Policy makers should consider effective ways to incentivise the equitable provision of SMRs.

Richard McLellan

Work conducted by the Oral and Maxillofacial Surgery Department, NCIC

Mr Pilkington Oral and Maxillofacial Surgery consultant is unable to attend this conference, but has asked that a summary of the work completed by the Oral and Maxillofacial Surgery Department be presented at The NCIC Research & Innovation Conference.

The work undertaken over the last few years which has been presented regionally, nationally and internationally includes the following posters;

- Intraosseous Schwannoma of the Mandible; report of a rare finding and review of the literature – Mr L Collins and Mr R J J P Pilkington – Presented at British Association of Oral and Maxillofacial Surgery
- The use of Cone Beam CT and sterolithic models in planning and removal of supernumerary teeth and orthodontic extrusion of ectopic teeth in cleidocranial dysostosis – Mr M A Cobb, Mr R J J Pilkington, Mrs S Germain, Mr P Germain and Mr A Paterson – Presented at British Association of Oral and Maxillofacial Surgery
- Bimaxxilary Osteotomy in a patient with history of bisphosphonate medication, a case report and literature review – Miss L E Han, Mr A W Paterson, Mrs S Walker, Mr P Germain and Mr R J J Pilkington – Presented at 27th EACMFS congress Rome, Italy
- An Evaluation and comparison of front of neck access simulation training with animal tissue, 3D printed and combined models – Mr R J J Pilkington, Mr B Steel, Mr A W Paterson, Dr C Srivastava and Mr P Counter

Jack Messenger

What role can physiotherapists play in enhancing patient adherence to physiotherapy treatment of lower back pain in adults: A scoping-review.

Background: Lower back pain (LBP) is a prominent and escalating problem in adults in the UK and worldwide. LBP is a leading cause of disability and workforce absenteeism. The prevalence of LBP is expected to rise, posing a significant public health problem. To address this problem physiotherapists, prescribe home-based exercise programmes (HEPs). However, patient non-adherence is high and therefore expected benefits aren't delivered. This isn't understood within the literature, including the role that physiotherapists can play to enhance adherence.

Methods: The updated Joanna Briggs Institute guidance framework and PRISMA Scoping methodology were used. CINAHL, Cochrane Library, MEDLINE, ProQuest, SCIENCE DIRECT and SPORTDiscuss databases were searched (2018-2023), with 9 published full-text studies in English included from the search strategy, data was extracted using a narrative synthesis.

Results: 9 studies (5 quantitative and 4 mixed methods) were included, with 5,173 participants with a mean age of 47 years. Three key themes arose from the narrative synthesis relating to the role of the physiotherapist in enhancing adherence: educator (improving patient awareness, knowledge, and efficacy of self-management); motivational coach (providing motivation and using shared decision making to prescribe and demonstrate specific and simple patient-centric exercises); strategist (understanding and addressing patient-centric barriers and utilising behavioural change techniques (BCTs) and technological rehabilitation (TR) to enhance adherence).

Conclusions: The synthesis outlines three key themes: educator, motivational coach and strategist. This corresponds to the multidimensional role(s) that the physiotherapist can play in enhancing adherence. There is promising preliminary evidence, relating to physiotherapists as strategists to enhance adherence, specifically BCT and TR warranting future research. However, disparities with the concept of adherence were identified and this review found a lack of evidence to draw definitive conclusions. The findings recommend that more literature is required to further understand the topic and address disparities which may limit future adherence studies.

Caroline Millett-Spicer

Background:

- Often the first time that a newly qualified FY1 will be expected to manage an unwell patient by themselves will be during an on-call shift1. Naturally this can be a major source of anxiety for new doctors starting in August (2). Clinical guidelines have been shown to improve the quality of clinical decisions by offering explicit recommendations for clinicians who are uncertain about how to proceed (3). Studies show barriers to guideline adherence include; lack of guideline awareness, time constraints and ease of access (4). Studies evaluating the introduction of clinical guidelines have shown significant improvement in the process and outcome of care (5).
- The aim of this QUIP was to facilitate and improve easy access to guidelines for new FY1s to reduce anxiety and subsequently improve the quality of standardized care.

Methods

- We wanted to create an intervention that would allow juniors to quickly access relevant guidelines to manage the most common on-call conditions, with the aim of reducing anxiety for their first on-call shifts.
- FY1s at CIC were surveyed during their shadowing period prior to their first on-call (27 responses)
- An 'On-Call Essentials' lanyard card was designed with a limited budget (<£50) and distributed to new FY1s at CIC in August.
- The FY1s were the re-surveyed at the end of their first rotation

Results:

- 96.3% of FY1s did not feel confident to find the information they needed on call prior to their first on-call shift
- Responses to re-survey post card introduction were positive. 71.4% of FY1s use the card weekly and 85.7% find QR codes an effective and quick way of accessing the guidelines.
- 100% of new FY1 in August felt quick access to key guidelines would reduce their anxiety surrounding their first on call shift. Importantly respondents identified advantages to a physical intervention with one describing the card as feeling “like moral support in your pocket”. 71% felt having the card decreased their anxiety.

Conclusions:

- This quality improvement project proposes that the introduction of an ‘On Call Essentials’ lanyard card is a practical, affordable and easily adaptable intervention for any NHS Trust aiming to support the wellbeing of FY1s by reducing anxiety and additionally has the potential to improve patient care.

Nour Nakeshbandi

Optimising Amoxicillin Prescribing: Enhancing Stewardship and Reducing Overuse

Background: Antibiotic resistance is a global concern, driven by the overuse of antibiotics. Antimicrobial stewardship promotes appropriate prescribing to combat resistance. Current guidelines advise most amoxicillin courses should not exceed 5 days unless clinically justified. However, extended courses are still being prescribed more often than necessary.

Methods: A retrospective audit reviewed amoxicillin prescriptions issued between September 2024 and February 2025 using data from EMIS, the GP practice's electronic medical record system. The audit assessed how many prescriptions exceeded 5 days, whether they were clinically justified, and what factors contributed to extended durations. Findings were compared to the same period in the previous year.

Results: Out of 141 prescriptions, 128 (90.8%) were for ≤5 days, and 13 (9.2%) exceeded 5 days. Longer courses were clinically appropriate—for example, for recurrent infections and COPD rescue packs. Compared to the previous year (20 extended courses), extended prescriptions decreased to 13, showing a 35% improvement.

Conclusions: The project successfully reduced unnecessary prolonged amoxicillin courses and improved adherence to antimicrobial guidelines. Key outcomes included better prescriber awareness, structured clinical reviews, and enhanced communication of best practices. Sustaining these improvements will require annual audits, continuous education, EMIS alerts for extended courses, and engagement with both clinicians and patients to support responsible antibiotic use.

Ruchi Nasa

Adopting molecular classification for endometrial carcinomas; A feasibility study in a DGH setting.

Background: The FIGO-2023 staging for endometrial carcinomas advocates the integration of molecular classification alongside the histological subtype. All endometrial cancers undergo testing for MMR proteins. POLE testing is conducted selectively in specific cases, as per the guidelines by the BAGP.

Methods: The histological diagnosis, along with ER, MMR, p53 IHC, and POLE mutation status of 51 endometrial carcinoma cases diagnosed on endometrial biopsy at Cumberland Infirmary, Carlisle, UK in 2023, were assessed for the feasibility of molecular classification. These cases were reclassified to incorporate the molecular subtype and the distribution of various histological subtypes within these molecular groups was also performed.

Results: 51 cases of EC were diagnosed on endometrial biopsy (Figure 2). In 3 cases, IHC and molecular testing could not be performed, due to scanty tissue. Only p53 was performed for another case. ER, PR, IHC for MMR and p53 was done in rest of the 47 cases. POLE testing was performed in 19 cases, based on the BAGP guidelines. PIK3CA driver mutations was found in 8 cases and one case had mutation in FGFR2 gene.

Molecular classification was done in 19(37.2%) cases where POLE testing was performed**.**

Conclusions: Molecular classification was feasible in only 37% of our cases due to the unavailability of POLE testing. Smaller biopsies offer improved tissue fixation and superior antigen preservation.

Without POLE testing, there is a risk of misclassifying patients as MMRd/p53 abnormal since POLE mutations can lead to subsequent secondary abnormalities. We advocate for POLE testing to be performed upfront on all endometrial biopsies

Chidi Ollawa

Ultrasound Presentation of Epithelioid Malignant Mesothelioma of the Tunica Vaginalis

Background: Malignant mesothelioma of the tunica vaginalis (MMTV) is rare, accounting for less than 1% of all mesotheliomas. Diagnosing MMTV can be challenging due to its non-specific clinical and radiological presentation, which is often obscured by a chronic hydrocele.

Methods: A 69-year-old male with no history of asbestos exposure, scrotal surgeries, or infections was initially suspected to have a large hydrocele on clinical examination and presented to the ultrasound department. Initially, a Canon Aplio i700 ultrasound unit with a linear transducer at 18 MHz was used for a systematic testicular scan. The scan aimed to thoroughly assess the tunica vaginalis and beyond to identify any lesions masked by the hydrocele. Subsequently, an MRI scan was conducted following the ultrasound findings, and a histopathology examination was performed post-orchiectomy

Results: Ultrasound showed turbid fluid with internal echoes within the scrotal sac with multiple hypoechoic, irregular, nodular adherent lesions attached to the tunica vaginalis. The MRI scan reported a large complex left encysted hydrocele with peripheral nodular opacities attached to the wall. Histopathology following orchiectomy advised by urology MDT revealed a malignant epithelioid neoplasm, positive for Pan-CK (AE1/3, Calretinin, WT1, vimentin. CK5/6, CK7 and BerEP4), confirming the diagnosis of an epithelioid malignant mesothelioma of the tunica vaginalis. The systematic approach to ultrasound examination, multimodality imaging strategy and urgent histopathology assessment were pivotal in facilitating a timely diagnosis. The patient has recovered well and is in good health, and post-surgical CT of the thorax, abdomen, and pelvis appears normal.

Conclusions: While most cases report a single nodule or papillary excrescence in the tunica vaginalis, our case illustrates a multi-nodular variant with a chronic complex hydrocele. This suggests that MMTV can also present as multiple nodules without prior asbestos exposure. A multidisciplinary team, including sonographers, radiologists, urologists, and histopathologists, is necessary to optimise outcomes.

Kim Ostridge

Enhancing Patient Involvement in Stroke Rehabilitation Service Design by Providing Physiotherapy Student Research Placements in a Rural and Coastal NHS Trust.

Introduction: Services are often designed and implemented within the NHS by clinicians. Involving patients in developing service priorities ensures clinical assumptions are challenged and services meet patients' needs. The drive to increase NHS student placement capacity provides an opportunity to merge student learning with patient involvement, across rural communities. Upper limb rehabilitation after stroke is most effective at high intensities. Involving patients in the design of upper limb rehabilitation services is key to effective service provision.

Objective: To understand the priorities and barriers to upper limb rehabilitation after stroke in a rural and coastal NHS trust.

Methods: Two Physiotherapy students undertook a research placement from September to October 2024, supported by an NHS clinical educator. A Microsoft Forms survey was undertaken with stroke patients across the region, focused on what, where, when and how rehabilitation should be delivered.

Results and Discussion: Fourty-seven surveys were completed with stroke patients across acute hospital sites (44%), outpatient clinics (17%), rehabilitation groups (17%), third sector groups (12%) and home (8%). Eighty-eight percent of respondents had suffered a stroke in the last year. Mobility was the rehabilitation priority in the acute hospital setting (76%). Priority for upper limb rehabilitation increased in community settings (69%). The preferred service delivery setting was outpatient group therapy (52%). Barriers to engagement were identified as fatigue (36%), pain (29%) and transportation (27%).

Conclusions: Further patient and public involvement should focus on the design of sub-acute/chronic upper limb rehabilitation services delivered in an outpatient group. Careful consideration should be given to location, transportation, and the management of fatigue and upper limb pain.

Kim Ostridge

Implementing Mental Practice in a NHS Stroke Unit: A Patient Experience Review.

Introduction: Mental practice (MP) is a training method that involves repetitive cognitive rehearsal of physical movements. The National Clinical Guidelines for Stroke recommend MP to improve arm function in addition to usual therapy. Delivering new therapeutic approaches in a Plan Do Study Act (PDSA) cycle can be informative and improve implementation across the NHS.

Method: Physiotherapists working on a NHS Hyper-Acute and Stroke Rehabilitation unit identified patients consenting to MP. Audible MP scripts were provided with visual aids as required. Patient experience of MP through weekly interview was collected and thematic analysis undertaken monthly. Three PDSA cycles were complete.

Results: Patient themes after one PDSA cycle were ""Enjoyment", and "Difficulty Concentrating". In response, a Hand Laterality screening tool for MP was introduced, alongside personalised MP scripts using the PETTLEP framework. Patient experience of the PETTLEP scripts at the end of cycle two were "Enjoyment" and "Distress". There was no reporting of inability to concentrate. In response PETTLEP scripts were made less evocative and regular mood screening was introduced. After three months patient themes broadly identified "Enjoyment".

Conclusions: Offering MP to patients in an acute NHS setting can become standard practice as an adjunct to usual care. The use of hand laterality testing appeared to reduce reports of difficulty to undertake MP. PETTLEP scripts can have a detrimental effect on mood if too evocative for patients in a hospital setting. Clinicians should consider MP script content carefully and review mood regularly.

Madalina Pasca

How clean is clean - Disposable vs protocolled laundered vs 'home-washed' hats

Background: Reusable hats are a recommendation by the Colleges of Surgeons as part of the Greener Theatres initiative. The project below describes infection control implications at NCIC.

Methods and results: 30 surgical hats were divided in 3 groups. Their hat surfaces were brought into contact with environmental culture.plates (Tryptic Soy Agar-Tween 80-Lecithin-Agar) followed by 7 day aerobic incubation at 30^{o} C with colony counts at 2 and 7 days. 2 representative samples were taken from each group for gram stain and microscopy, subcultures (Columbia Agar Base, Columbia Horse Blood Agar, Sabouraud Dextrose Agar with Chloramphenicol (0.5g/L)) and organism identification using MALDI-TOF.

Results are summarised below:

	30 surgical hats					
Method	10 single use hats			10 hats	10 'home-washed' hats	
	New box	Half empty box	Almost empty box	protocolled single household laundering	5 pigeon hole hats	5 volunteer hats

						
Results						
Colony count >50 Day 2	-	-	-	-	+	+
Colony count >50 Day 7	-	-	-	+	+	+
MALDI – TOF organism identification			Staphylococcus warneri Micrococcus luteus, Kocuria rhizophila, Fungi	Acinetobacter ursingii Bacillus licheniformis Moraxella osloensis Pseudomonas nitroreducensis	Staphylococcus aureus, S. hominis + S. epidermidis Pantoea agglomerans Bacillus cereus	

Home-washed hats are culture positive on day 2. Reusable hats washed per-protocol are culture positive on day 7. Cultures of single use hats taken from an almost empty box grew Staphylococcus warneri, Micrococcus luteus, Kocuria rhizophila and fungi.

Conclusions: Protocolled laundering of reusable hats at 60 ° C followed by hot tumbledrying lowers the bacterial count of hats compared to 'home-washed' hats. Preparations are in its final stages to install dedicated laundering equipment for the washing of reusable hats. The use of special detergents to avoid biofilm formation within the washing machine as well as cycle verification should achieve comparable culture rates similar to single use hats.

Neya Krisna Pawan

Carbon emission and financial savings of changing to reusable hats for UCLan medical students – no drop in the ocean

Background: Theatres is a carbon- and energy-hotspot in hospital care. Changing from disposable to reusable hats has been recommended to reduce carbon emissions in theatres.

Methods: Hat usage of UCLan medical students at NCIC was calculated by multiplying the number of year 3 and year 4 medical students with the number of theatre placements. Carbon emission savings have been estimated assuming a 79% reduction in carbon emission based on life cycle analysis . Financial calculations are based on expenses for single use hats which have been provided by the Trust's procurement department.

Results: 69 UClan medical students (40 students in year 3, 29 students in year 4) attend theatres on average of 9 times resulting in 621 uses of surgical hats.

From April 2022 to April 2023 North Cumbria Integrated Care spent £ 12090.60 on 64100 surgical hats equivalent to 19 p per hat. 69 students using single hats 621 times during placement incurs a charge of £758.31 to the theatre budget whereas reusable hats are sewn by volunteers from recycled materials at minimal cost covered by charitable funds not impacting the theatre budget.

Carbon emission for a single use hat are estimated to be 0.03kg eCO2 compared to 0.05kg CO2 of a reusable hat.

621 single use hats correspond to 18.3kg eCO2 compared to 3.8 kg eCO2 for 621 uses of reusable hats resulting in savings of 14.5kg eCO2 for the whole cohort of year 3 and 4 students during the academic a year.

Conclusion: Financial and eCO2 savings by medical students changing to reusable hats on placement in surgery are well defined, but may be considered only minor. The effect of adopting a more sustainable theatre etiquette as a lifetime habit and transferring this approach to other theatre routines is more difficult to measure, but may well add up to more than the drop in the ocean.

Neya Krisna Pawan

Financial and eCO2 savings by changing tor reusable gowns for UCLan medical students on placement in North Cumbria Integrated Care (NCIC) – no drop in the ocean

Background: The Colleges of Surgeons recommend replacing single use- with reusable gowns as part of the Greener Theatres checklist. We looked at the financial and eCO2 savings for UCLan medical students making this change while on placement in NCIC.

Methods: We multiplied the number of year 3 and 4 UCLan medical students and their estimated theatre attendance on placement with eCO2 and financial saving per gown use.

Results: eCO2- and financial savings of UCLan medical students changing to reusable gowns are 434 eCO2 and £120.6. The breakdown of those calculations is summarised below.

eCO2 savings

UCLan Medical Students n =	67 (Year 3 = 38, Year 4 = 29)
Theatre attendances n =	6 (range 2 - 9)
Gowns per attendance n =	1
Gowns per cohort per placement	67 x 6 = 402
1 Single-Use Gown	1636g eCO2 / year
1 Reusable Gown	557g eCO2 / year

Single-Use Gown per cohort per academic year (6 x 67 x 1636 g)	658 kg eCO2
Reusable gown eCO2 per cohort per academic year (6 x 67 x 557g)	224kg eCO2
eCO2 saving per cohorts per academic year	**434 eCO2 / year**

Financial savings

NCIC procurement provided the cost of a standard single use gown as £2.51 and the cost of the use of a reusable gown £2.21. Changing to reusable gowns results in savings of 402 x £0.30 = £120.6.

Conclusion: Financial and carbon emission savings of UCLan medical students using reusable gowns may appear modest. The cumulative effect of sustainable theatre etiquette (eg reusable rather than single use gowns) as a lifetime habit taught at first encounter with theatres at undergraduate is likely to add up to more than the drop in the ocean.

Jayalakshmy Payippattu Leelamma

An audit of reporting of thyroid cytology specimens and their correlation with thyroid histology.

Background: The Royal College of Pathologists (RCPath) recommends the use of numerical Thy categories for reporting thyroid cytology and provides indicative frequencies and predictive values for malignancy. This audit assesses the reporting practices at Cumberland Infirmary against these national standards, evaluating compliance, category distribution, histological correlation, and referral practices.

Methods: A retrospective analysis was conducted on 100 thyroid cytology cases reported in 2024. Each case was reviewed for inclusion of a Thy category. The distribution across Thy1–Thy5 categories was recorded and compared to UK national data. Where available, histological follow-up was used to determine positive predictive values (PPVs). Data on referrals to expert review were also collected, with a focus on Thy3, Thy4, and Thy5 cases.

Results: Thy categories were included in 98% of reports. Distribution showed higher-than-expected rates of Thy1/1c (34%) and Thy3a (26%), with fewer Thy2 cases (24%) compared to national ranges. Histological correlation was available in 30% of cases. PPVs were: Thy3a – 23%, Thy3f – 60%, Thy4 – 100%, and Thy5 – 100%, broadly aligning with UK data. All Thy5 and 80% of Thy4 cases were referred appropriately. Among Thy3a/f cases, 32% were referred for expert opinion, reflecting local practice variation from tertiary centre recommendations.

Conclusions: The audit demonstrated strong adherence to RCPath guidance, with high compliance in Thy category assignment and malignancy prediction accuracy. However, category distribution varied from national expectations, suggesting local practice influences. Referral practices for Thy3 cases were inconsistent with tertiary guidance, highlighting the need for a locally agreed referral protocol. Continued monitoring and a re-audit are recommended to ensure sustained improvement.

Siddharth Rajah

A cost consequence analysis of the management of acute ureteric stones in rural Cumbria from a patient and NHS perspective.

Background: Cost to patient from acute stone treatment is poorly understood and has not been extensively examined in literature. The impact of travel and days off work can be significant for patients who live in remote areas and have to travel long distances to access healthcare. We hypothesise that out-of-pocket costs associated with acute ureteric stone treatment in rural and remote communities may represent a significant barrier to access to healthcare.

Methods: We retrospectively collected data on the day's patients attended healthcare interventions, their travel distances, and NHS reference costs to assess the total treatment cost for both patients and the NHS. This analysis included consecutive patients who underwent primary ureteroscopy and extracorporeal shockwave lithotripsy (ESWL) over a similar time period."

Results: We had data on 24 patients who had ureteroscopy as the primary treatment and 21 who had ESWL. The median age was 51 (IQR17), 35 males. 12/25 patients who underwent ESWL needed follow up ureteroscopy for complete stone clearance.

The median cost to patient who underwent primary ureteroscopy was less than that of ESWL (£414.86 IQR37.06 vs £883.21 IQR407.29).

The median cost to the NHS of patients who underwent primary ureteroscopy was slightly cheaper than ESWL (£4352 IQR 1635.5 vs £5015 IQR4510).

The median travel distance was 66.6km(IQR63.9). 3 patients travelled over 90km to receive ESWL treatment.

Conclusions: This study highlights the challenges of acute stone management in rural settings and underscores the importance of considering the patient's perspective in healthcare planning. A cost-effective intervention in rural and remote communities may be different from those in urban areas and therefore it is important that counselling and treatment algorithms are individualised to patient circumstances particularly in rural, remote, and deprived communities.

Peter Sudworth

A Novel, Low-Cost Solution for High-Fidelity 3D Printed Temporal Bone Models to Enhance Mastoid Surgery Training

Simulation is a cornerstone of mastoid surgery training, with 3D virtual reality and 'dry lab' temporal bones widely used worldwide. However, these solutions are often hindered by high costs, limited availability, and a lack of realism[1–4]. Additionally, traditional 3D-printed models require extensive pre- and post-processing, restricting their accessibility to specialised cases[5].

We present a novel, cost-effective, methodology to produce high-fidelity temporal bone models with minimal barriers to entry. Utilising this approach, we can generate individualised 3D-printed multicolor models tailored to upcoming mastoid surgeries, enabling surgeons to practice procedures in a realistic pre-operative setting.

In a pilot study, five temporal bone CT scans were obtained from patients scheduled for cortical or revision mastoidectomy. Scans were segmented using thresholding and printed on a consumer-grade platform[6]. Facial nerve, tegmen, sigmoid sinus, and ossicles are synchronously printed in contrasting colours, enabling realistic appreciation of these structures during drilling.

With a per-model cost of £2.49 following a one-time hardware investment of £699[7], our method significantly undercuts commercially available models priced at over £175 each[8], highlighting the cost advantage and versatility of our approach.

Printing was performed using Fused Deposition Modeling with Polylactic Acid filament and Polyvinyl Acetate (PVA) dissolvable supports. The use of

internal PVA supports eliminates the majority of additional processing, dramatically improving workflow efficiency.

Models were evaluated by senior otology consultants, who rated their anatomical realism as “excellent” and suitable for surgical practice. Our methodology represents an important step in otologic training, combining affordability, accessibility, and high fidelity to support global surgical education.

1. Bhutta, M. F. A review of simulation platforms in surgery of the temporal bone. *Clinical Otolaryngology* 41, 539–545 (2016).
2. Frithioff, A. *et al.* 3D-printing a cost-effective model for mastoidectomy training. *3D Print Med* 9, 1–8 (2023).
3. Linke, R. *et al.* Assessment of skills using a virtual reality temporal bone surgery simulator. *Acta Otorhinolaryngologica Italica* 33, 273 (2013).
4. Stavrakas, M. *et al.* Objective structured assessment of technical skill in temporal bone dissection: validation of a novel tool. *J Laryngol Otol* 135, 518–528 (2021).
5. Iannella, G. *et al.* A new 3D-printed temporal bone: ‘the SAPIENS’—specific anatomical printed-3D-model in education and new surgical simulations. *European Archives of Oto-Rhino-Laryngology* 281, 4617–4626 (2024).
6. Ang, A. J. Y. *et al.* Developing a production workflow for 3D-printed temporal bone surgical simulators. *3D Print Med* 10, 1–15 (2024).
7. Bambu Lab. Bambu Lab P1S 3D Printer | Bambu Lab UK Store. https://uk.store.bambulab.com/products/p1s?id=54282197063792640 6&skr=yes&srsltid=AfmBOorq-hmM2ztwMZvsVnVBRAhLqelH0TLuuYvUA6dlfkkSf07mFup4HfA&gQT=3 (2024).
8. PHACON. PHACON Temporal Bone Patient “Schmidt” – Phacon. https://phacon.de/en/shop/hno/tf-bt-phacon-temporal-bone-patient-schmidt-detektierbar/ (2024).

Abdelrahman Swidan

PACIFIC trial …. NCIC Local results

Background: The PACIFIC trial is a randomised controlled trial aiming at evaluating the role of biparametric MRI (bpMRI) and image fusion targeted biopsies for the detection of prostate cancer. This is an analysis of the results of the cases recruited locally at North Cumbria integrated care NHS foundation trust.

Methods: Patients referred from the general practitioner with clinical suspicion of prostate cancer have been recruited under guidance by the PACIFIC trial protocol and randomized to either having a bpMRI or a multiparametric MRI (mpMRI), then if indicated for biopsy randomized to either having image fusion or visual registration for targeting the lesions identified on MRI.

Results: A total of 85 patients were recruited and had an MRI, of which 83 have been reported. 42 cases (50.6%) had a bpMRI, while 41 cases (49.39%) had a mpMRI. A total of 71 lesions where detected, they were categorized into 3 groups, first group PIRAD 1/2 (8 lesions), second group PIRAD 3 (17 lesions), and the third group PIRAD 4/5 (46 lesions). This was 8/8/25 for bpMRI and 0/9/21 for mpMRI. In the 19 cases who already had the MRI and went for biopsy and had both target and systematic biopsies, bpMRI yielded 5/11 lesions positive for malignancy (45.4%), while mpMRI yielded 8/15 lesions positive for malignancy (53.3%).

Out of 4 cases where image fusion was used in targeting, 2 cases where positive for malignancy (50%) and two were negative. While out of 11 cases where visual registration was used for targeting, 5 were positive for malignancy (45.45%) and 6 were negative.

Conclusions: At these numbers bpMRI/mpMRI and image fusion/visual registration have comparable results and yet more cases need to be recruited to verify the results and set out the differences more clearly.

Hadar Zaman

Incidence of structured medication reviews in England among those aged 65+ with severe frailty: a study using electronic health records

Background: Since October 2021, Primary Care Networks in England have been required to identify patients who would benefit most from a structured medication review (SMR). Five high risk groups should be targeted, including patients with severe frailty. A SMR is a comprehensive review of patients' medications aimed to decrease over-prescribing and reduce adverse drug-related outcomes. The aim of this study was to report the uptake of SMRs overall and according to demographic factors, among those with severe frailty.

Methods: Primary care data was ascertained from the Clinical Practice Research Datalink on patients aged 65+ with severe frailty between October 2021 and June 2024. Patients that were residing in a care home were excluded. Frailty was derived using the electronic Frailty Index (eFI), which provides a frailty score based on health deficits recorded routinely in primary care EHR, with a score>0.36 indicating severe frailty. We reported the number and percentage of patients that attended an SMR overall and according to age (65-69, 70-74, 75-79, 80-84, 85-90, and ≥ 90 years), gender, ethnicity (ONS census subgroups), index of multiple deprivation (IMD, quintiles), and rurality of general practice (GP) location (urban, rural).

Results: There were 337,754 people of whom 111,313 (33%) received an SMR. The incidence of SMRs decreased with increasing age, with 8,061/21,713 people aged 65-69 (37.1%) having an SMR versus 22875/76,589 (29.9%) people aged ≥90 years. Males were less likely to receive an SMR (39,597/123,433 (32.1%)) compared to females (71,715/214,320 (33.5%)). Patients residing in the least deprived areas (quintile 5: 22,687/66,829 (33.9%)) were more likely to have an SMR than those in the most deprived areas (22,335/68,025 (32.8%)). Incidence of

SMRs was lowest in white people (101,005/310,264 (32.6%)) and highest in black (3,018/7,740 (39.0%)) and Asian people (5,856/15,613 (37.5%)). There were also differences within ethnic groups, for example 34.8% of Chinese people vs 39.0% of people with any other Asian background had an SMR. People registered at a GP in an urban area (97,456/292,785 (33.3%)) were more likely to have an SMR than those in a rural area (13,857/44,969 (30.8%).

Conclusion: A third of patients with severe frailty received an SMR. SMRs were more common in younger people, those living in the least deprived areas of England and those registered at an urban GP practice. The uptake of SMRs also varied according to ethnicity. We next to plan to report rates of SMR according to combinations of these characteristics using multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA).

Organisational team

Christopher Rao, Consultant Colorectal and General Surgeon and Joint Clinical Lead for Research and Innovation

Kathie Wong, Consultant Urologist and Joint Clinical Lead for Research and Innovation

Barbara Cooper, Research and Development Manager

Laura Spark, Medical Directorate Development Administration Assistant

Finley Page, Medical Directorate Development Administration Assistant

Bethany Bell, Medical Directorate Development and Data Lead

Gemma King, Medical Directorate Development Coordinator

Professor Dave Dagnan, Consultant Clinical Psychologist and R&D Director

Lynsey Brown, Medical Directorate Business and Development Manager

Thank you for attending today. We would love to hear your thoughts and comments about the event. Please use the QR code below to access a short survey or use the following link (https://www.surveymonkey.com/r/JQNJLZW)