P153 **End to end electronic Multi-disciplinary team meeting workflow using order comms**

Sara Abdulrahman; Dimitri Amiras; Katherine Van Ree
Imperial College Healthcare NHS Trust

Background: MDT discussions have traditionally been difficult to arrange and track in a patient history. The requesting of the case to be discussed in an MDT is via various methods which were not always integrated with the existing database and EPR systems. After GDPR all this information needs to be transferred and stored in a compliant manner which is difficult when multiple systems are being utilised. We describe a new workflow which has allowed clinicians to check MDT reviews in the same place in the EPR/PACS under the patient record. By utilising the existing HL7 interface between Cerner EPR and the radiology system. The various MDTs were built as exams that could be ordered via the existing order Communication. MDT discussions orders placed in Cerner were used to drive the PACS system using the existing desktop integration. Users could place notes in the form of unauthorised reports on the system and then authorise formal reports once the discussion was concluded. The report was then sent back to Cerner.
Purpose: To describe the HL7 based workflow for MDT discussions to be requested and recorded in the patient history in the EPR, RIS and PACS and to demonstrate the benefit of utilising the existing workflows.
Summary: It is possible to use existing radiology and electronic patient record systems and interfaces to create a GDPR compliant complete MDT workflow with existing information systems without specialist software or interfaces. Future developments include scheduling MDT discussions using existing radiology scheduling procedures.

P154 **Graves' disease and radiotherapy: The work of Florence Stoney**

Adrian Thomas
Canterbury Christ Church University

Radiologists and surgeons have always looked for treatments that avoid major surgery, which has a considerable morbidity and mortality. Following the discovery of X-rays its therapeutic potential was quickly appreciated, and treatments were given for a wide variety of conditions with considerable success. This presentation describes a technique that was used in the early 20th century, and places modern clinical practice within a historical context.
Florence Stoney started treating Grave's disease in 1908, and by 1912 had seen 48 patients. She described her experience at the annual meeting of the British Medical Association held in Liverpool[1,2]. This became a well-established treatment for this condition although as not without complications, and, whilst external radiation is no longer used today, radiation treatment continues with the use of radioiodine, which was introduced following the Second World War. Florence stated "It is to me rather terrible to see these patients subject to operation, where the risks are considerable, and shock in their nervous systems very severe and sometimes fatal."
Her patients were often very sick, and the oral anti-thyroid drugs used today were not yet developed; for example propylthiouracil only came into medical use in the 1940s, and methimazole was only introduced in 1954. Of her 41 completed treatments Florence had 14 complete cures and 22 had great improvement and returned to ordinary life. Her results, and importance of her work will be demonstrated.

1. Stoney FA. (1912) On the Results of Treating Exophthalmic Goitre with X-rays. Brit Med J. ii: 476-480 2. Stoney, FA. (1913) On the Results of Treating Exophthalmic Goitre with X-rays. Archives of The Roentgen Ray. 17 (8) 317-322

EDUCATION AND WORKFORCE

P155 **Radiation therapy education and certification in Ghana**

Emmanuel Worlali Fiabedzi
University of Ghana

In response to the need of adequately trained Radiation therapists in the health delivery system of Ghana, a Bachelor of Science in Therapy Radiography Programme was established by the University of Ghana School of Allied Health Science in 2014.It is the only institution training Radiation therapists. Over the years, the Radiation therapy programme in Ghana has grown from initially admitting local students to admitting foreign students from other Africa countries.
The program runs bi-annually with a maximum student intake of eight. The entire duration of the Programme is four years followed by a one year compulsory clinical internship at the National Centre for Radiotherapy and nuclear Medicine. There is also Vocational clinical training which is supervised during inter-semester breaks. Students take general courses together with their colleagues in the General Radiography Program during their first and second year after wish they branch into more specialised courses in their third and final year. An external examiner mostly from abroad examines the students in their final clinical practicum exams before students graduate.
In order to practice in Ghana, students then undertake their one year compulsory clinical training at the National centre for Radiotherapy followed by a registration exam with the Allied Health Profession Council. Successful candidates are issued with their licences and are posted to any of the three Radiotherapy Facilities in Ghana for job placement. In future, changes will be required to increase student intact, run it yearly, ensure that certification remains of high standard and recognition continues.

1. Donkor Andrew, Yakanu Frederick, Anarfi Kwabena, Adesi Kyei Kofi, Della Atuwo-Ampoh Vivian, Fiagbedzi Emmanuel, Lawson Pearl and Hanson Justice, "Radiation therapists' historical and central role in cancer care in Ghana: Professional inquiry",(2017) INTERNATIONAL SOCIETY OF RADIOGRAPHERS & RADIOLOGICAL TECHNOLOGISTS AUGUST NEWSLETTER,Volume 26,p 33-36

P156 Championing undergraduate oncology: Roles and responsibilities of consultants and registrars

Ian S. Boon; Eldho Joseph; Patricia Packham; David Bottomley; Rebecca Goody; Mohan Hingorani; Nathalie Casanova; Emma Dugdale; Kate Cardale; Emma Thomas; Di Gilson; Mehmet Sen; Robin Prestwich; Rachel Cooper; Shirin Namini; Michelle Kwok-Williams

Leeds Cancer Centre, St James's Institute of Oncology, Leeds Teaching Hospitals NHS Trust

Background: Cancer incidence in the UK continues to increase contributing to demands on oncology service[1]. Recruitment to consultant and registrar in oncology continues to be challenging[2]. Early exposure of medical students to oncology is essential for medical education and future recruitment to oncology[3].

Methods: Respective consultants and registrars are given leadership roles to design and lead year 1 medical student oncology placement at a cancer centre. This is an iterative process taking into account feedback from previous batches of medical students. Students are assessed with direct observation of procedural skills (DOPS) and weekly debriefing sessions. Feedback is collected for quality improvement.

Results: We had two cohorts of 4 medical students in 2018. End of placement feedback is collected and analysed.

Learning environment: We received excellent feedback (100%) in the domains of induction, facilities and delivery of teaching.

Motivation and passion: Students were impressed with the passion of doctors exposing them to oncology with enthusiasm.

Feedback culture: Introduction of direct observed assessments and debrief sessions allow feedback to be given on student performance in a safe environment.

Learning experience: We were graded highly for opportunity for learning and clinical experience (97%). 100% of our students would recommend our placement to their colleagues.

Conclusion: Undergraduate oncology benefits from clear leadership roles in medical education from consultants and registrars. Student feedback should be regularly reviewed to make improvements to medical placements. Considerations for pastoral and logistical support for students are essential. Observed assessments and debriefing sessions can be useful medical educational tools.

1. Cancer Research UK, (2018). Cancer Statistics for the UK
2. The Royal College of Radiologists, (2017). Clinical oncology UK workforce census report
3. General Medical Council, (2015). Promoting excellence: standards for medical education and training

P157 How do we maximise medical student teaching opportunities in clinical oncology?

Samantha Cox [1]; Emma Christopher [1]; Sarah Davies [2]; Sarah Gwynne [1]; Kath Rowley [1]

[1]South West Wales Cancer Centre; [2]ABMUHB

Background: The prevalence of cancer is such that nearly every doctor will regularly encounter patients that either have a current or previous cancer diagnosis; however exposure to Clinical Oncology during medical training remains limited (RCR, 2016). It is therefore vital that undergraduate training opportunities are maximised to ensure future doctors are adequately skilled and to improve speciality recruitment.

Purpose: To demonstrate how the RCR non-surgical oncology curriculum (RCR, 2014) can be introduced to undergraduate oncology placements; to provide examples of how medical student oncology placements can be structured.

Summary: Third year medical students each spend a week within our cancer centre; the majority of the placement was previously spent on the ward clerking patients admitted acutely with complications of their cancer and/or treatment. Modifications were made in line with the RCR curriculum during the 2017-2018 academic year. We developed a timetable to include sessions in outpatient clinics and MDTs. A suggested reading list of textbooks and websites was circulated. To ensure adequate exposure to the major oncological emergencies regardless of the admissions to the ward, a 1-hour tutorial was written using 4 real patient cases and delivered on a weekly basis by the oncology registrars; learning objectives, question/answer handouts and feedback forms were created. The attachment has received excellent feedback from students and continues for the 2018-19 academic year. The project has improved the oncology training medical students, providing teaching on the minimum competences required of newly qualified F1 doctors to safely care for oncology patients.

1. Royal College of Radiologists (2016). Why clinical oncology? Factors influencing trainees' choice of career
2. Royal College of Radiologists (2014). Medical undergraduate non-surgical oncology curriculum

P158 Reducing training burden through a comprehensive integrated radiotherapy simulation placement

Pete Bridge; Sarah-Jane Ketterer; Flora Al-Samarraie; Bev Ball; Jenny Callender; Kerrie-Anne Calder; Jo Edgerley; Cath Gordon; Mike Kirby; Marie Pagett; Pauline Pilkington; Bridget Porritt; Mark Warren

University of Liverpool

Background: Workload pressure on clinical departments can challenge implementation of radiotherapy student placements and restrict learning opportunities. Although evidence supports use of simulation for health profession training, much of this (Bridge 2007, Jiminez 2018) is based on students' self-assessment of enjoyment and perceived learning of technical skills only. This study

aimed to determine the feasibility of reducing training burden with the use of a novel comprehensive integrated simulation placement.
Method: A cohort of 29 first-year undergraduate radiotherapy students were randomly assigned to either simulation placement, based in an academic facility, or conventional fortnight clinical placement. Formative assessment of all students was performed based on the existing clinical outcomes and assessment criteria grids and scores were compared between the two groups.
Results: Use of a wide range of equipment, actors, service users and structured activities created a realistic simulated placement. Mean overall scores for each cohort were within 3% of each other. The simulation cohort had statistically significant ($p = 0.028$) higher "communication" scores than the traditional group. The integrated and prospectively designed learning experience of the simulation placement combined with the ability to gain both technical and interpersonal skills through mistakes helped improved learning compared to clinical placement.
Conclusions: Results from this study confirm that intensive simulation can enable students to acquire clinical skills away from busy departments. Better-prepared students will integrate with clinical staff more readily and improve the patient experience. Use of simulation placements may allow for reduction of overall clinical placement time, reducing departmental training burden.
1. Bridge P, Appleyard R, Ward J, Phillips R, Beavis A. (2007) The development and evaluation of a virtual radiotherapy treatment machine using an immersive visualisation environment. Comp. Educ.49, 481-494
2. Jimenez Y, Thwaites D, Juneja P, Lewis S. (2018) Interprofessional education: evaluation of a radiation therapy and medical physics student simulation workshop. J. Med. Radiat. Sci. 65:106-113

P159 The mistreatment of staff who raise valid concerns in the NHS must stop

Hugh Wilkins

The NHS has a serious problem in its response, or lack of response, to staff who raise concerns in the public interest. In many if not all NHS scandals which have come to light, including the former Mid-Staffordshire foundation trust, Bristol paediatric heart surgery, Baby 'P', Savile, Paterson, Gosport etc, some staff did speak up but were ignored/vilified/disciplined, whilst others kept silent for fear of: futility of raising a concern because nothing would be done about it; and/or repercussions for themselves and their careers. The 2015 Freedom To Speak Up Review report[1] refers to shocking accounts of the way some people have been treated.
Senior leaders in the DHSC and NHS know that this problem is widespread in many parts of the NHS; it exists within the imaging and oncology community. There is recognition that there is need for culture change such that speaking-up becomes normal practice, though the current approach to promoting such change is controversial. At present it is apparent from many cases that NHS staff cannot be sure that it is safe to speak up when things are not right. Legislation which supposedly protects 'whistleblowers' - i.e. staff who raise concerns in the public interest - is weak, and typically provides only paltry financial compensation to the few who succeed against legal and financial odds in winning cases at employment tribunals.
This is a complex and often misunderstood area, in which education is sorely needed. This talk will outline salient issues, and suggest appropriate ways forward.
1. Francis, R.F. (2015) Freedom to Speak Up: An independent review into creating an open and honest reporting culture in the NHS. Executive Summary para 3, page 8. http://freedomtospeakup.org.uk/

P160 Co-production: Working together to create a shared sense of compassion

Amy Taylor; Denyse Hodgson
Sheffield Teahing Hospitals NHS Trust

Background: Historically, academic researchers carried out studies with little or no involvement of those who commissioned, provided or used health services (Heaton et al 2006). Consequently, findings were often deemed to not be relevant to or representative of those groups (Cooksey, 2006. Tooke, 2007). Co-production is founded on the notion that users are not simply participants, instead are regarded as active agents' not merely passive subjects (Ostrom, 1996).
Purpose: The presentation provides an overview of the co-production strategies employed within the authors PhD; Exploring compassion and compassionate behaviours in cancer care. Bringing together the researcher, Therapeutic Radiographers, student Therapeutic Radiographers and patients diagnosed with cancer and care-givers to share and explore their experiences of compassionate practice. Co-production permitted synthetisation and integration of the data enabling the collective experiences of the different participant groups to shape the themes generated. Mixed participants groups, ensured the voices of each group were reflected in the findings.
Summary: By detailing the co-production methods employed, delegates will gain an understanding of the purpose of co-production and ways in which it can be embedded into healthcare research and service development. The presentation will address the benefits of co-production and identify the self-reported advantages conveyed by the co-production participants they gained from their involvement. Including improvements both student and registered Therapeutic Radiographers felt they would make to improve their own compassionate practice. Using co-production in research can produce findings which hold significance and meaning within clinical environments by engaging those who both use and deliver the service, enabling
1. Cooksey D. (2006) A review of UK health research funding: London: Her Majesty Treasury
2. Heaton J, Day J, Britten N. (2006) Collaborative research and the co-production of knowledge for practice: an illustrative case study. Implementation Science, 11(20)

3. Ostrom E. (1996) Crossing the great divide: coproduction, synergy, and development. World Development, 24(6):1073–87
4. Tooke J. (2007) Report of the high-level group on clinical effectiveness, London: Department of Health; 2007

P161 **Personnel flux and workplace anxiety: Personal and interpersonal consequences of understaffing in UK ultrasound departments**

Paul Miller; Lorelei Waring; Gareth Bolton; Charles Sloane
University of Cumbria

Introduction: By 2013, the UK government's Migration Advisory Committee had determined sonography to be a formal shortage specialty, and understaffing remains a key concern for research in the domain[2,4]. This presentation, emergent of a qualitative study funded by Health Education North West, explores unit managers' perspectives on the present state of UK ultrasound. The focus herein falls upon the personal and interpersonal consequences of this circumstance for individuals working in specific understaffed departments.

Methods: A thematic analysis informed by a Straussian model of Grounded Theory was utilised;[3] N=20 extended accounts provided by ultrasound department leads in public (n=18) and private (n=2) units were collected and analysed accordingly.

Results: Two global themes are addressed herein. The first describes how both inter-departmental movement of senior sonographers and early retirement, within a nationally understaffed picture, impacts negatively upon local knowledge economies and lessens training opportunities. The second highlights how such staffing instabilities can undermine the day-to-day self-efficacy of managerial staff and practicing sonographers alike, with both orders of individual reported to be persistently dealing with the stress of actual and potential departures. This is further reported to undermine team morale, and render planning for the future extremely problematic.

Conclusions: It is personnel flux, rather than simple short-staffing, that is reported to cause the greatest social-psychological problems for both managers and sonographers[1]. The issues raised herein require further examination from the perspective of sonographers themselves, in order to corroborate the views of the managers interviewed.

1. Hudson CK, Shen W. Understaffing: An under-researched phenomenon. Organ Psych Rev 2015;5:244-263
2. Migration Advisory Committee. Skilled shortage sensible: Full review of the recommended shortage occupation lists for the UK and scotland, a sunset clause and the creative occupations. London: Migration Advisory Committee; 2013
3. Sloane C, Miller PK. Informing radiography curriculum development: The views of UK radiology service managers concerning the 'fitness for purpose' of recent diagnostic radiography graduates. Radiography 2017;23(s1):S16-S22
4. Waring L, Miller PK, Sloane C, Bolton GC. Charting the practical dimensions of understaffing from a managerial perspective: The everyday shape of the UK's sonographer shortage. Ultrasound 2018;26(4):206-213

P162 **Pulmonary nodule reporting radiographers - 2 years in practice**

Paul Holland [1]; Hazel Spence [1]; Alison Clubley [2]
[1]Nottingham University Hospitals; [2]Nottingham University Hosptials

Locally there was a lack of thoracic radiologists and with appropriate training radiographers have been able to report CT Chest follow up scans for pulmonary nodules. The role allows radiographers to do comparison measurements from baseline and previous CT imaging to establish whether these nodules are longstanding and then recommend follow up, discharge, referral to Nodule MDT or escalate to Lung MDT. By referring to the British Thoracic Society (BTS) guidelines[1] the radiographers endeavour to produce accurate timely reports with comparison volumetry measurements. This service consolidates the existing pathway for nodule follow up with more consistent and detailed reports to enable effective patient management. This role has been undertaken with in house training by thoracic radiologists, attendance at MDTs and collaboration with respiratory physicians.

Further training in plain film chest reporting Is also been undertaken by the nodule reporters to locally expedite diagnosis of lung cancer. Additionally the role currently involves NIHR research on new predictive nodule software. There is also a current partnership with other centres to improve radiographer involvement in the optimal lung cancer pathway[2]. This service was developed in May 2017. Continual audit and report feedback has been very positive and the thoracic radiologists and respiratory physicians have seen the service improve since its inception.

1. Callister M, Baldwin D, Akram A et al. (2015) British Thoracic Society guidelines for the investigation and management of pulmonary nodules. BMJ Thorax
2. Lung Clinical Expert Group (2017) National optimal lung cancer pathway

P163 **Student radiographers: Current career aspirations**

David Palmer; Claudia Foster
Sheffield Hallam University

Background: Health Education England (2017) introduced an initiative, the "cancer workforce plan". This plan included the commitment to increase levels of the current workforce with an additional 2227 Full-time Equivalent Diagnostic Radiographers by 2021. The Society of Radiographers (2014) estimate there is currently 26,000 diagnostic radiographers to be registered with the HCPC, this initiative will increase the workforce by 8.5%. There will be an increase of demand on services and exploring career aspirations of student Diagnostic Radiographers will give an insight into the future workforce of radiography. This will

give an indication as to the potential impact of current students on this initiative and where the gaps in the workforce will be.
Method: Students at one university will be asked to participate, with informed consent, in an online survey using a combination of open ended and closed questions. This survey compromises of 14 questions, which explore the intentions of students' post-qualification. Question themes centred on student demographics, pre-course aspirations, modality interests and employment type and location. Results will be analysed using descriptive statistics and thematic analysis.
Results: The results of this study have not been collected at this point. Results will be collected in the near future.
Conclusion: Although no conclusion can be made until results have been analysed, it is anticipated that many participants will seek further education into modalities or into advanced practice. It is important to recognise the limitations of this study, such as the small sample size compared to the amount of students studying radiography.

1. Health Education England (2017). Cancer Workforce Plan: Phase 1: Delivering the cancer strategy to 2021, London, UK
2. The Society of Radiographers (2014). Diagnostic Radiography UK Workforce Report 2014, London, UK

P164 **Abbreviations used in imaging requests and reports and their potential pitfalls**

Lucy Knox [1]; Nikita Balaji [1]; Michelle Williams [1]; Simon McGuirk [2]; Fiona Hawke [2]
[1]NHS Lothian; [2]NHS Borders

Background: As the primary means of communication between radiology and other departments, request forms and radiology reports need to convey the necessary facts quickly and clearly. However, abbreviations have the potential to cause confusion, delay diagnosis and compromise patient safety. This audit aims to assess the frequency and types of abbreviations used in radiology requests and reports in a district general hospital.
Method: The imaging request and report for all chest X-rays (CXR) performed over a two-week period were reviewed. The text was reviewed and all abbreviations were identified and categorised.
Results: 763 CXR were reviewed. In total 167 different abbreviations were used in the requests and 23 different abbreviations were used in the reports. Abbreviations ranged from frequently used abbreviations (eg. COPD, chronic obstructive pulmonary disease) to unknown ones e.g. SPI. The most common abbreviation was SOB (short of breath), which occurred in 13% of requests. At least 1 abbreviation was used in 60% of CXR requests and 59% of CXR reports. The most frequent abbreviation in CXR reports was the type of radiograph (AP or PA), and when these were excluded only 9% of the reports contained abbreviations. Abbreviations were more frequently used in requests from within the hospital (617 requests, 69%) compared to requests from general practitioners (146 requests, 18%).
Conclusion: Abbreviations are used frequently, and are more common in imaging requests compared to radiology reports. The large spread in abbreviations shows how varied imaging requests are, and how many different abbreviations radiographers and radiologists must decode.

P165 **Assessment of the perceptions and expectations of radiographers in UAE to accept new responsibilities through role extension**

Mohamed Abuzaid [1]; Wiam Elshami [1]; Marilyn Baird [2]; Jonathan McConnell [3]
[1]University of Sharjah, College of Health Sciences, Medical Diagnostic Imaging; [2]Monash University, Department of Medical Imaging and Radiation Sciences, Melbourne, Australia; [3]Queen Elizabeth University Hospital, Glasgow and Monash University

Introduction: Success of radiographer role development in the UK and Australia has stimulated discussion about similar developments in the United Arab Emirates (UAE). Image interpretation may enhance professional status, improve job satisfaction and boost professional confidence for radiographers in the UAE. This article investigates radiographer perceptions, expectations and interest in future role extension for UAE radiographers.
Materials and methods: An online survey was used to obtain information about current status, opinions and perceptions of radiographers role extension. Demographics, qualifications, experiences, duties and prospective area of role expansion was also extracted. An emphasis on the potential for image interpretation was studied. Expectations, responsibilities and future educational requirements for role extension were explored.
Results: A 72% (185/257) survey response rate was achieved. Demographic analysis identifying educational background and staffing construct was performed. Respondents indicated areas they would like to receive education in, and existing educational approaches provided for current work areas. With respect to image interpretation, response rates varied according to the term defining image interpretation. Confidence in recognition of plain radiography features across a range of presentations was established. Participants indicated variation in CPD planning and levels of support. A large proportion of respondents (165/185) indicated they wished to role extend.
Conclusions: The UAE is not traditionally linked with promoting radiographer role change. By revealing UAE radiographers' perceptions about role extension this investigation identifies factors influencing role change to inform leaders about the potential for radiographer development in the UAE, notably through image interpretation responsibilities.

1. Thom SE. Does advanced practice in radiography benefit the healthcare system? A literature review. Radiography. 2018;24(1):84–9
2. McConnell J, Devaney C, Gordon M, Goodwin M, Strahan R, Baird M. The impact of a pilot education programme on Queensland radiographer abnormality description of adult appendicular musculo-skeletal trauma. Radiography
3. Hardy M, Snaith B. Role extension and role advancement - Is there a difference? A discussion paper. Radiography. 2006;12(4):327–31

4. Gqweta, Ntokozo. Role extension: The Needs, Perceptions and Experiences of South African Radiographers in Primary Health Care. South African Radiogr [Internet]. 2012;50(1):22–6

P166 **Addressing diversity on clinical placement: Improving the experience for radiography students**

Hilary Baggs; Charlotte Burnside
Birmingham City University

Background: With NHS courses now being fee paying with no access to a bursary the external pressures on students have increased and the modern radiography student population has become increasingly diverse. Anecdotal evidence suggests that the traditional clinical placement working day no longer fits with these students' lives. This study will allow the academic team to gather a deeper understanding of the student population and investigate the student experience in clinical placement, allowing us to personalise students' experiences.
Method: Questionnaires will be distributed to level 5 radiography students, with follow up interviews to elicit further information. This year group has been chosen as they already have a year's experience of placement but are not facing the pressures of their final year of study. Qualitative data will be analysed to show any trends in diversity. Open text answers will be analysed by looking for trends in student demographics and placement experiences. Interviews will be analysed using thematic analysis.
Results: It is expected that the results will show a hugely diverse cohort, and that the placement experience needs to be tailored to address this diversity.
Conclusion: We already know that a certain amount of diversity exists within the cohort, and some practice partners can accommodate students on an individual basis, however, this is not the case for every placement provider. With evidence from this research, we can open up discussions with all placements about how we can work together to address these issues, in order to enable to expand the workforce.

P167 **Governance - a framework for learning and career development for radiographers**

Malcolm McNinch
InHealth Ltd

With so much focus on Advanced Practitioner roles are there other avenues, unidentified or unexplored which are open to radiographers? Governance may by an overlooked and unidentified route which is not yet seen as a viable option to career progression. However, it can be satisfying, interesting and rewarding to those who decide to move into this sphere. Governance is not about policing services or systems nor is it about enforcing, change, rooting out bad practice or identifying areas where things may go disastrously wrong.
Whilst there may be certain aspects of these, there are key areas of knowledge and skills which must underpin any ability to work in this field:

- Service Improvement: How to bring about change, staff involvement, LEAN techniques, process mapping
- Clinical Knowledge: Anyone working in governance must have a strong and broad clinical background which should include general and specialist areas
- Tutoring and Training: The ability to impart knowledge, and desire to want to provide a high-quality service
- Human Factors: Understanding that people are fallible and make mistakes which cannot always be understood
- Incident Investigation: Incident/complaints review, Root Cause Analysis, recognition of Serious Incidents Policy
- Procedure Review: The skills to be able to write policies, review, maintain and update according to current legislation and guidelines
- Learning and Sharing: How to disseminate lessons learned from an incident to promote good practice and to stop it happening again Governance should empower, encourage, energise, inspire, improve, and give aspiration to best practice both in the clinical and managerial arenas.

P168 **Trailblazers: Stakeholder motivations for developing degree apprenticeships for the radiography profession**

Trudy Sevens; Julie Nightingale
Sheffield Hallam University

Background: Degree apprenticeships offer a new alternative route to health professional registration which aligns to an approved standard developed by employer-led stakeholder groups known as trailblazers. In 2017 three national radiography related (diagnostic radiography, therapeutic radiography and sonography) trailblazer groups were established and standards approved in 2018. This research aimed to identify challenges and opportunities related to the introduction of the degree apprenticeship training routes by exploring key stakeholder motivations for engagement in the trailblazer groups.
Methods: A multiple case study qualitative design captured stakeholder (chairpersons, employers, academics and professional body representatives) perceptions via semi structured interviews. Thematic analysis enabled emerging themes to be compared and contrasted within and between trailblazer groups. A radiography degree apprenticeship implementation model was subsequently created to guide future curriculum development.

Results: Emergent 'motivational' themes relate to the notion of increased control over their future workforce (desire for more local recruitment of students; better retention of staff; professional pride; professional recognition). The 'barriers' currently identified differ across trailblazer groups but appear to relate to workforce challenges (regulation; career structures; professional protectionism; financial sustainability).
Conclusion: Degree apprenticeships are a new concept for allied health professions and the experience of each development stage should be captured, built upon and learnt from. There is no previous research in this area, and our timely recommendations will support evidence-based apprenticeship curriculum developments and facilitate a seamless integration of apprentices into the existing radiography workforce.

P169 **Towards a discursive psychology of expertise in radiography education: Lecturers' use of "authenticity through autobiography" in classroom sessions**

Paul Miller; Lisa Booth
University of Cumbria

Background: Often drawing upon K. Anders Ericsson's approach[2] the contemporary corpus of research into radiography expertise tends to reflect a set of broadly social-cognitive concerns, whereby the knowledge and experience acquired by a professional are the focus[1]. The Discursive Psychological (DP) approach, however, provides an alternative model; herein, how expertise is performed becomes key[5] - DP describes how actors endeavour to make their own expertise persuasively and dynamically relevant in ways tailored to the intended audience.
Methods: Using the standard methods of DP[3], N=10 classroom sessions were analysed to highlight the nuanced interpersonal ways in which experienced radiography lecturers performed their own expertise.
Results: Findings indicate the routine use of a socio-linguistic device termed "authenticity through autobiography" in the discursive sciences[4]. The lecturers, in a variety of (usually) subtle ways, recurrently drew attention to:
(a) The quantity and/or quality of their professional service in radiography;
(b) the quantity and/or quality of their teaching experience; and
(c) the quantity and/or quality of their research outputs and activities. All were raised only in moments whereby the specific topics of discussion - or the actions of the students - could in some way be inferred to contextually challenge the lecturers' own status as experts. Moreover, the particular autobiographical details raised always directly addressed the specific nature and implications of any challenge.
Conclusions: The work presented draws attention to the importance of interpersonal performance in communicating information in radiography, such that it might be recognised by students as expert knowledge.

1. Donovan T, Litchfield D. Looking for cancer: Expertise related differences in searching and decision making. Applied Cognitive Psychology 2013; 27:43
2. Ericsson KA. An expert-performance perspective of research on medical expertise: The study of clinical performance. Med.Educ. 2007;41:1124-1130
3. Miller PK, Richardson BH. Depression, rational identity and the educational imperative: Concordance-finding in tricky diagnostic moments. Palgrave Communications 2017;3:17033
4. Widdicombe S, Wooffitt R. The language of youth subcultures: Social identity in action. Hemel Hempstead: Harvester Wheatsheaf; 1995
5. Wiggins S. Discursive psychology: Theory, method and applications, 1st ed. London: Sage; 2017

P170 **Waving not drowning: How preceptorship will equip degree qualified sonographers to excel in the workforce**

Nicola Davidson
Birmingham City University

Background: Preceptorship has been used in a wide range of health professions to provide support to newly qualified staff as they transition from student to registered practitioner. The preceptorship period should provide guidance and ensure that that each individual can develop to their full potential in a structured, supported way. Whilst a preceptorship period is advocated in many professions it is the responsibility of individual NHS trusts to determine how they will provide this support.
Purpose: With the introduction of a BSc Medical Ultrasound course a formal preceptorship period is being designed to enable this new transition. This has always been considered fundamental to the course by allowing the student to transition to practitioner and beyond, clinically and academically. To do this the preceptorship programme needs to be robust and meet the needs of the preceptee and their employer whilst ensuring that the preceptorship framework criteria are met. This poster shows how we are addressing these needs as we want to share our experiences with other educators and clinical sonographers.
Summary: As the first HEI to include sonographer preceptorship to those with an undergraduate qualification, we would like to present our journey of developing this programme.

P171 **Personal experiences of students on a new medical ultrasound education programme**

Louise McKnight; Penny Reed; Denise Paddock; Nicola Davidson; Anushka Sumra; Helen Brown; Helen White
Birmingham City University

Background: There is a recognised shortage in the UK medical ultrasound workforce which we are addressing with a direct entry BSc Medical Ultrasound qualification. Using an innovative approach to this workforce problem has given students on this new

course opportunities and challenges both academic and clinical, which we want to assess from their perspectives and use to inform future improvements.
Method: A qualitative methodology was used to gain an insight into students' personal experiences. Third-year students were invited to take part in interviews which used a semi-structured format. Data was analysed using thematic analysis, both theory-driven and data-driven, to allow exploration of our pre-conceived ideas and of evolving themes.
Results: Full results will be available later in the year.
Conclusion: Although this was a small group of participants, we felt it was important to explore students' experiences and while this work may not be generalisable, we expect to share our experiences with other providers who may benefit from our assessments of a new provision.

P172 Preliminary clinical evaluation (pce) by radiographers: How accurate are we?

Leah Fenning; Rebecca Melling
St Helen's and Knowsley NHS Trust

Background: Radiographers' contribution to image interpretation should not be undermined and work by Berman et al. 1985 was some of the first to recognise preliminary II by radiographers[1]. In a study that assessed how accurately staff can recognize and describe trauma, radiographer's scores were statistically higher than nurse practitioners[2]. By providing a written comment, radiographers are replacing the ambiguous 'red dot' previously used to highlight abnormal radiographs.
Aim: The aim of this audit was to establish how accurate radiographers are at detecting abnormalities with a view to implementing a written PCE system.
Method: This data has been taken over one month however the completed audit will address 12 months. All patients who attended A&E for plain film imaging examinations were considered (excluding chest and abdomen). Only requests for query fracture or dislocation were included. Quantitative data was collected based on whether the radiographer applied a 'red dot' and/or wrote a brief description of the abnormality. The radiographers' judgements were then compared to the official report and statistical measures of performance were calculated.
Results: The radiographers' achieved an overall sensitivity of 91%, a specificity of 97% and an accuracy of 95%.
Conclusion: Maximising the contribution of all members of the diagnostic team is central to improving capacity, efficiency and the patient experience. It also supports the national values outlined by Health Education England in supporting the development of Advanced Clinical Practice[3]. Results of such audits may identify areas for development which could be addressed through tailored continuous professional development.

1. Berman, L., De Lacey, G., Twomey, E., Twomey, B., Welch, T. and Eban, R. (1985). Reducing errors in the accident department: A simple method using radiographers. British Medical Journal, 290(6466), pp.421-422
2. Coleman, L. and Piper, K. (2009). Radiographic interpretation of the appendicular skeleton: A comparison between casualty officers, nurse practitioners and radiographers. Radiography, 15(3), pp.196-202
3. Health Education England (2017). Multi-professional framework for advanced clinical practice in England. London: Health Education England

P173 Multidisciplinary performance in preliminary clinical evaluation of appendicular radiographs

Paul Lockwood; Lisa Pittock
Canterbury Christ Church University

Background: The study aimed to evaluate the performance of a cohort of healthcare professionals (nurses, paramedics, a radiographer, an assistant practitioner, and a physiotherapist) in image interpretation of appendicular radiographic examinations following a preliminary clinical evaluation (PCE) course.
Methods: Thirteen participants completed an image based Objective Structured Examination (OSE). The case bank comprised of 25 retrospective appendicular radiographic examinations. Prevalence of abnormal examinations approximated 52%, and included traumatic conditions, normal variants and incidental findings. The individual test scores were analysed against the OSE reference standard with alternative free-response receiver operating characteristic (AFROC) calculation of Area under the Curve (AUC), sensitivity, specificity, and Cohen's Kappa for multi-reader agreement. Professional subgroup results were compared with Analysis of Variance (ANOVA).
Results: The individual study results demonstrated a range of test scores from 100% to 78.2%. The individual sensitivity scores ranged from 100% (95%CI 81.2-100) to 80.8% (95% CI 58.2-94.4), specificity values were 100% (95%CI 78.4-100) to 72.7% (95%CI 48.6-72.7). The AUC was 1.000 AUC; (95% CI 0.863-1.000) to 0.779 (0.569-0.918). The ANOVA analysis between each subgroup (professional) performance displayed test score F 6.42; F Critical 3.83; p=0.01; AUC score F 4.44; F Critical 3.83; p=0.03).
Conclusions: In an academic environment the radiographer and nurses scored higher than published literature. The paramedics, assistance practitioner and physiotherapist results demonstrated in this study could not be compared to published papers due to an absence of research on these professions ability in radiographic image interpretation.

1. Society and College of Radiographers. (2013) Preliminary Clinical Evaluation and Clinical Reporting by Radiographers: Policy and Practice Guidance. London: Society and College of Radiographers
2. The Health and Care Professions Council. (2013)Standards of Proficiency: Radiographers. London: HCPC

3. Stevens BJ, Thompson JD. (2018) The impact of focused training on abnormality detection and provision of accurate preliminary clinical evaluation in newly qualified radiographers. Radiography.24(1):47-51
4. Piper KJ, Paterson A. (2009) Initial image interpretation of appendicular skeletal radiographs: a comparison between nurses and radiographers. Radiography 15, 40-48
5. L. Coleman, K. Piper. (2009) Radiographic interpretation of the appendicular skeleton: a comparison between casualty officers, nurse practitioners and radiographers. Radiography, 15, 196-202
6. Hardy M, Barret C. (2004) Interpretation of trauma radiographs by radiographers and nurse practitioners in the UK: a comparative study. The British Journal of Radiology, 77, 657-661
7. Health Education England. (2017) Multi-professional framework for England. Health Education England, Leeds
8. The College of Paramedics and Health Education England. (2017) Digital Career Framework 2017. The College of Paramedics, Bridgwater
9. The Royal College of Emergency Medicine. (2017) Emergency Care Advanced Clinical Practitioner Curriculum and Assessment Adult Only/Adult and Paediatric / Paediatric. Version 2.0. The Royal College of Emergency Medicine, London
10. Nursing and Midwifery Council. (2009) Record keeping: Guidance for nurses and midwives. London: Nursing and Midwifery Council
11. Making a Difference (1999). Strengthening the Nursing and Midwifery and Health Visiting Contribution to Health and health care. D.O.H London
12. Chartered Society of Physiotherapy. (2016) Advanced practice in physiotherapy: Understanding the contribution of advanced practice in physiotherapy to transforming lives, maximising independence and empowering populations. Chartered Society of Physiotherapy, London
13. IMAGE Information Systems Ltd. (2008) K-PACS (Version 1.6.0). Germany
14. Berman L, de Lacey G, Twomey E, Twomey B, Welch T, Eban R. (1985) Reducing errors in the accident department: a simple method using radiographers. Br Med J (Clin Res Ed). 9;290(6466):421-2
15. Snaith B, Hardy M. (2014) Emergency department image interpretation accuracy: The influence of immediate reporting by radiology. International emergency nursing. 1;22(2):63-8
16. Freij RM, Duffy T, Hackett D, Cunningham D, Fothergill J. (1996) Radiographic interpretation by nurse practitioners in a minor injuries unit. Emergency Medicine Journal. 1;13(1):41-43
17. Brealey S, Scally A, Hahn S, Thomas N, Godfrey C, Crane S. (2006) Accuracy of radiographers red dot or triage of accident and emergency radiographs in clinical practice: a systematic review. Clinical radiology.61(7):604-15
18. Swaby-Larsen D. (2009) X-ray interpretation by emergency nurse practitioners: Dorthe Swaby-Larsen and colleagues discuss an audit of the ability of emergency nurses to interpret X-rays accurately. Emergency Nurse.17(6):24-9
19. Ball ST, Walton K, Hawes S. (2007) Do emergency department physiotherapy Practitioner's, emergency nurse practitioners and doctors investigate, treat and refer patients with closed musculoskeletal injuries differently?. Emergency Medicine Journal. 24(3):185-8
20. Kersten P, McPherson K, Lattimer V, George S, Breton A, Ellis B. (2007) Physiotherapy extended scope of practice–who is doing what and why? Physiotherapy. 93(4):235-42
21. College of paramedics. (2017) Paramedic post-graduate curriculum guidance 2017. College of paramedics. The College of Paramedics, Bridgwater

P174 Review of the effectiveness of a spinal surgical multi disciplinary team meeting

Martin Mitchell; Sanjay Sinha; Marion Mueller; Imran Rafiq
Medway NHS Foundation Trust

This poster presents the findings of a review of spinal multidisciplinary team meetings held from 2010 to date with specific pathway data taken between January 2017 and December 2018. This innovative initiative of medway maritime hospital incorporates spine surgeons/radiology/pain team/community musculoskeletal services at regular bi weekly meetings. The results of an audit of patients discussed shows the significant contribution of team working in the community with regular meetings boosting the cohesiveness and team spirit of regional spinal services. About one third of the patients discussed in the 2 years were discharged after mdt discussion reducing the pressure from spine services.

P175 Use of simulation techniques in MRI training

Darren Hudson; Jenny Corden-Jolly
InHealth

Background: Simulation is a teaching technique aimed at recreating real life scenarios within which trainees can practice and develop clinical skills away from the clinical setting in a safe, non-threatening environment. It was felt this could be a useful approach to introduce into the training programme in an attempt to help expedite trainee skills to help meet operational demands. It was hoped that through different simulation approaches that were as close to the real clinical setting as practicable, trainees would build confidence and develop competence sooner.
Purpose: The approach outlined demonstrates how simulation techniques have been introduced into an innovative training programme to support learners develop confidence in new clinical skills. This was achieved using actors in simulated screening scenarios, access to a mobile scanning unit in which to begin to interact with gantry controls and coils for positioning, and purchase of an online scanner interface to aid hand-eye co-ordination and begin understanding slice placement and parameter selection. Overall, feedback has shown that following training days using the techniques, trainees felt more confident and prepared to be able to actively participate back in the clinical environment. Whilst there were some barriers to all techniques, they were generally well received by trainees and thought to support their understanding and application in practice.
Summary: An overview of simulation approaches used will be given to demonstrate their application within a modality specific training programme. Feedback from trainees and facilitators will also be presented to show its acceptability and impact within training.