



Conclusion: The author will present a series of recommendations e.g. the dissemination of good practice and identify areas of further research such as the need to consult patients in relation to the most appropriate method of discussing potentially sensitive or embarrassing issues related to the practical conduct of imaging procedures.

Professional training and education

P156 Completion of imaging request forms at a private hospital: Do referrers take it for granted?

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Background: Private hospitals may be less inclined to reject inadequately completed imaging request forms due to the income-generating potential of radiological investigations. Consequently, referrers may be less motivated to fill in all necessary items on their requests. Instead, the onus is on Radiology staff to contact referrers for further information rather than returning incomplete requests. This reduces efficiency and may lead to errors. We audited the compliance of referrers to local and RCR standards in their completion of request forms at a private hospital.

Methods: Request forms received by our Radiology Department on two separate days in October 2014 were audited. For each form, the presence or absence of key items relevant to an investigation was recorded. For all items, the target was 100% compliance.

Results: There were 103 request forms. The modalities were: plain film (42%), ultrasound (25%), CT (15%) and MRI (18%). Excellent compliance (100%) was achieved for patient demographics and names of referrers. There was satisfactory compliance for provision of relevant background information (85.4%) and clinical question (82.5%). However, information on allergies (1.2%), infection risk (0%), contrast safety (33.3%), MRI contraindications (57.9%) and breast-feeding/pregnancy (40.9%) was poorly provided.

Conclusion: There is room for improvement. Plans are in place to increase awareness, including amongst resident medical officers who are frequently delegated to perform this task. There is also a drive to empower ward nurses to ensure compliance and to complete certain items, such as patients' MRSA status, given their better knowledge. A future re-audit will hopefully demonstrate positive changes in practice.

P157 i Refer or i just Refer!

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Objectives: To see if GPs are aware of and use the iRefer guidelines.

Method: A questionnaire was sent out to GPs working in North Somerset, Bristol and South Gloucestershire CCGs to try and ascertain the local knowledge and use of the iRefer guidelines.

Relevance: Primary Care provider referral rates to Secondary Care are under increasing scrutiny. This, along with access to online point-and-click requesting platforms such as the Integrated Clinical Environment (ICE) is likely to increase direct requests to diagnostic services from Primary Care.

The RCR has published online guidelines to facilitate best use of clinical radiology services - the iRefer Guidelines.

Outcomes: The majority of GPs are either unaware of the existence of the iRefer guidelines, did not know how to access them or did not use them. Some GPs are aware of older resources designed to help make use of clinical radiology services.

Discussion: Clinical radiology is becoming more sophisticated and is increasingly in demand. It is imperative that this resource is used in the most effective way to avoid unnecessary (and potentially harmful) tests and indirectly harm those whose tests have been delayed as a result. The iRefer guidelines provide an easily updatable, agile resource and its existence should be more widely publicised. This poster will demonstrate the limited awareness of iRefer by GPs working in a small geographical area, and, if extrapolated, provide an indication of the limited degree to which



the iRefer has been absorbed into practice within the wider population. The willingness of some GP's to use older resources suggests that there is a need for iRefer or equivalent. The use of Decision Support Systems (DSS) will also be discussed.

P158 Does the layperson misinterpret normal anatomy on routine radiographs?

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Our project aimed to assess whether the general public fully understand what they see when looking at normal radiographs. Lack of understanding may cause unnecessary anxiety and lead to poor patient outcomes.

We compiled a short questionnaire, which asked a convenience sample from a university campus population to look at X-ray images, including chest, abdomen, knee and paediatric wrist. Participants were required to state whether they thought the image was 'normal' or 'abnormal' and give reasons for their answer.

The UK government intends to grant the public online access to all of their medical records and diagnostic images by 2018 in an effort to streamline the healthcare system and put patients more in control of their own health. A high proportion of patient pathways involve the radiology department and patient interpretation of images is unknown.

Out of 69 participants approximately 59% of participants identified the chest as abnormal (wrist 37%, abdomen 42%, knee 55%). The reasons for assuming the image was abnormal varied, but common themes were identified such as thinking the heart was an abnormality. Our research demonstrates that the participants did not always have sufficient knowledge to accurately distinguish normal from abnormal radiographic anatomy. We anticipate that the public requires some form of education or support in place before they can access all the information healthcare professionals normally see. We propose the government look at providing education within school time for future generations, and systems for educating current generations as is currently done in other countries.

P159 CPD events - a platform for improving quality, patient care and supporting best practice

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Our department includes two MRI scanners and two ultrasound machines. We perform c.2,200 procedures per month, with patients being referred for musculoskeletal conditions by referrers including GPs and non-medically qualified professionals.

The RCR emphasises that referral guidelines should be reinforced through educational messages on reports and at clinical meetings to ensure greater awareness and a sustained reduction in unnecessary referrals.

In our experience some referrers lack knowledge in the use and value of diagnostic modalities - evident in referrals lacking information and clear clinical questions to be answered as well as subsequent queries to reporters.

We have established educational CPD programmes that bring together radiographers/sonographers, radiologists, specialist consultants and referring clinicians. Different conditions are presented by subject matter experts, providing referrers with case studies, information about the referral information needed, techniques to assess patients prior to referrals, and onward treatment pathways.

185 referrers attended 7 CPD events in the past year. More than 80% of attendees report that the events had improved their knowledge and understanding and that their learning objectives were met. Feedback enabled our radiologists to adapt reports to provide more guidance on onward treatment to referrers. We have seen a reduction in referral issues and post scan queries. We have improved our engagement with referrers, who feel more confident in seeking our guidance and support.

CPD events are an ideal platform to share and develop best patient care directly with our staff and referrers, ensuring continued best practice. Further topics are planned to build upon this engagement.

P160 Can professionalism and regulation of hours co-exist?

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Objectives: To examine where a doctor's duty lies when legislation requires them to curtail their working day at a set time yet professional values dictate otherwise.

Relevance: There has been controversy and debate concerning the regulation of working hours for doctors in the UK. Specifically, the impact of reduced working hours on the overlapping themes of patient safety, training of doctors and medical professionalism. Two key regulatory sources are responsible for this: the junior doctors' contract - the 'New Deal'; and the UK Working Time Regulations (European Working Time Directive).

Outcomes: Modern medicine must embrace the necessary realities of shift work and the handover of care to allow professionalism to thrive. This must involve truly robust handover arrangements, supported by information technology solutions. In cultural terms, an acceptance of '24/7' health services is commensurate with the societal desire for high quality care at all times. The only way professionals can deliver this is through sustainable and careful workforce organisation and job planning. Alongside these changes, undergraduate and postgraduate medical training should emphasise the importance of effective shift working and robust handover as central pillars of professionalism.

Discussion: There appears to be broad agreement that hours regulation poses a challenge to professional values. However, professionalism is multifaceted, hard to define, and harder still to measure. There is also recognition that a modern health service must impose some restriction on the working hours of its professionals in the interest of quality, patient safety, and doctors' health.

P161 Undergraduate radiology teaching in a British medical school - an audit of current practice

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University of St Andrews

Aims/objectives: To audit the content of radiology teaching to undergraduate medical students at a UK medical school.

Content: Teaching resources used during the academic year 2013-2014 were reviewed for radiology content.

Images or references to radiology encountered by students in lectures, clinical skill sessions, anatomy sessions or tutorials were analysed in their intended context. They were also assessed against standards set by the Royal College of Radiologists (RCR) undergraduate radiology curriculum.

Relevance/impact: The RCR undergraduate guidelines suggest that delivery of radiology teaching should be coherent, structured and clinically relevant. By auditing our current teaching we aim to develop a structured radiology curriculum consistent with RCR guidelines.

Outcomes: 767 images were identified: 44% (334) were used to demonstrate normal anatomy; 46% (349) were used to teach imaging interpretation. The RCR guidelines describe three sections: "fundamental principles", "common emergency conditions" and "imaging in common presentations". Despite the large number of images used, we found that multiple topics in each of these sections were not covered by current teaching.

Discussion: This project highlights the varying degree to which different areas of the RCR curriculum are being delivered to undergraduate medical students. Without a structured approach to the introduction of teaching on imaging, major topics can be inadvertently omitted. Using the results of our audit we will eliminate duplication, avoid omissions and bring the curriculum into line with current RCR guidelines. Our approach could be utilised by other universities to evaluate their undergraduate radiology teaching.

P162 Dim, describe and draw: Developments of an innovative method of teaching image interpretation

[David Roberts](#)



Abertawe Bro Morgannwg University Health Board

Background: Teaching on radiological image interpretation should be interactive and encourage students to consider the importance of how they report images, with whole class interactive teaching shown to improve the rate of learning by 41%. Describing images to those who haven't seen them is an important skill to develop, and in clinical practice this takes place when describing images via the telephone to seniors and other specialities.

Aims: To allow students to gain experience in interpreting and describing images, illustrating the importance of accurate descriptions.

Materials: Computer with PowerPoint, radiological images, pens & paper, blindfolds, headphones & music playing device.

Teaching Method: Selected students are shown a radiological image and write down their description. Students who have not seen the image then have to draw the image based on their colleague's description. The drawing is then compared with the original image, with the teacher and students giving feedback on the description and drawing. Blindfolds alone or blindfolds and headphones can be used to prevent the 'drawers' from seeing or hearing the other students talk about the original image, depending on group and room size.

Outcomes: Teaching sessions have been held on skeletal radiographs, CXR, AXR and CT Heads, and have received excellent feedback to date.

Discussion: I will discuss how I have developed this method for both for small and large groups, and how I setup, prepare and run dim, describe and draw sessions.

P163 Electronic clinical assessment of undergraduate radiographers: Experiences using MyKnowledgeMap

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Sheffield Hallam University¹; Sheffield Teaching Hospitals²; Barnsley Hospital NHS Foundation Trust³

Aim: Evaluate experiences of designing and implementing an electronic clinical assessment programme.

Content: Rationale for change, storyboarding, system building, benefits, limitations and experiences.

Relevance/impact: Regular contact with tutors has a positive effect on the student clinical experience. Feedback is timely and personal facilitating fast implementation of recommendations with easy follow up of impact and effectiveness regardless of geography. The system creates a student focussed dynamic environment between University and clinical staff. It enables equity in tutor/student time regardless of placement volume.

Outcomes: Going paperless has delivering a positive effect on the student experience and will now be implemented across all future cohorts.

Discussion: The Northern Counties clinical assessment scheme lies at the heart of the electronic system, enhanced by formative opportunities for feedback and student evaluation. The system is cloud based, available via computer, tablet, or smartphone 24/7; open to user choice within policy. The software enables almost limitless customisation and so careful storyboarding of the entire scheme prior to building is strongly recommended. The SHU model is easily transferable to other HEI's. This experience has highlighted the lack of parity in time spent between individual students and tutors whilst on clinical placement and the vast amount of travel time and cost expended. On-site tutor attendance is still required to maintain good clinical/academic ties and fulfil some of the broader roles but significantly less often. Regardless of the clinical visit regime, students feel that the electronic system keeps them 'connected' and highly value this support.

P164 An evaluation of service users as an educational resource in an undergraduate diagnostic radiography module

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University of Exeter



In 2013, the HCPC announced a new mandatory standard to involve “service users and carers” in accredited education and training programmes. This new academic standard states that “Service users and carers must be involved in the programme”, reflecting a continuing shift in modern healthcare towards a patient-centred focus with increased active involvement from service users and carers. In line with this, our medical imaging programme has incorporated service users into its curriculum in a range of capacities.

The focus of this report was to critically evaluate a “service user session” where invited service users living with chronic health conditions discuss their experiences with small groups of students. Brookfield’s four lenses of critical reflection were applied to gauge current student, staff and service user opinion on the sessions, as well as service user involvement in the broader diagnostic MI programme. Insights gained were then put into context with the evidence base. Themes such as the benefits, praise, criticisms, barriers and potential improvements for the sessions were identified and explored, along with potential new ways of implementing service users as part of the MI programme.

Good patient-centred care and communication continues to be a strong focus in radiography. It has been shown to have far reaching effects such as improving diagnostic performance for radiographic examinations as well as improving patient attendance, compliance and satisfaction. Service user involvement in associated higher education courses can help students understand the importance of patient-centred communication and give student radiographers the confidence to improve their clinical practice.

P165 Enhancing reflective practice in student radiographers with the use of theme boards

[Jane Harvey-Lloyd](#); [Ruth Strudwick](#)

University College Suffolk

Purpose/aims: The aim of this presentation is to share our experience of using a theme board workshop with six diagnostic radiography students at the start of their second year.

Relevance/impact: The students were asked to reflect on their experience of practice learning and to build a theme board to illustrate those reflections. It is recognised that the use of imagery is a powerful way to encourage the reflection and evaluation of past events and was used to encourage the workshop participants to explore their experiences, feeling and perceptions of practice.

Design/method: The students were given some introductory information regarding the use of theme boards and their ability to capture experience, ideas, and moods thus enabling the person constructing the board to in some way crystallise these (Bligh, 1992). It is anticipated that this method will access memories of and feelings about experiences that may otherwise be forgotten (Leavy, 2009). At the end of the workshop each participant presented their theme board to the group during the plenary whilst interpreting the images used. This process is thought to play a significant part in the learning experience.

Outcomes: The data were collated and analysed using a thematic analysis.

Other experiences of utilising this approach will be shared, including the use of interprofessional groups and the potential for international audiences.

P166 Development and assessment of an innovative assignment to increase student engagement and learning of magnetic resonance imaging safety

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Objective: While magnetic resonance imaging can be considered a safe modality in regards to its use of non-ionising radiation, the reality is that MRI can produce serious bio-effects and as such there are stringent safety guidelines that need to be followed by operators. To ensure that radiography students are fully informed of the risks associated with MRI, a multiple-step assignment task was devised. The content of the presentation will discuss the design of the assignment and provide feedback from students regarding their experiences.



Method: The assignment was centered on the reading of a MRI safety paper and the development and ultimate inclusion in a formal examination of questions that students believed to be important concepts of understanding for themselves and fellow students. At the completion of the assignment, students were asked to complete an anonymous on-line questionnaire aimed at assessing if they believed the assignment task increased their level of understanding more than a formal lecture.

Outcomes and impact: All of the 99 students replying to the survey stated that they understood why MRI safety is such an important topic and 79% reported to having learned a lot from undertaking the assignment with only 18% of students believing that they would have learned more through a formal lecture. Only 41% agreed that they would have read the paper if it was not examinable with 71% indicating that the assignment gave them an appreciation of the useful and important information to be found in the literature.

P167 Exploring the transition period of diagnostic radiographers during their first six months of practice

[Jane Harvey-Lloyd](#)

University College Suffolk

Introduction: The radiography profession is undergoing significant change in response to social, economic and political influences. This has resulted in increasing service demands and a requirement for graduates to possess a much wider range of skills (Decker, 2009). The pressures now being placed on newly qualified health and social care practitioners has initiated research in both nursing and medicine which has focussed on the transition of student to practitioner (Ross and Clifford 2002; Mooney, 2006). The aim of this project is to explore the experience of transition from student to practitioner in diagnostic radiography and to utilise the findings to improve transition in the future across a range of health professionals.

Method: An interpretive phenomenological approach has been adopted consisting of three face-to-face interviews of each participant at three months, six months and twelve months post qualification. These time intervals have been identified in the literature as critical times (Decker, 2009; Smith and Pilling, 2007). Thematic analysis is to be utilised in that through examining each individual experience, commonalities and relationships, including differences across the participants may be identified (Gibson and Brown, 2009).

Results: Stage one results of the three month interviews will be presented thematically alongside those from stage two at six months.

Discussion: The themes identified in the results will be discussed in view of current literature and contextualised in order to identify areas for improvement.

P168 Candidates' perspective of service user involvement in the selection process for diagnostic radiography

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Aim: The aim of this study was to explore the candidates' perspective of involving service users in the selection of diagnostic radiography students.

Content: This presentation discusses the responses of 43 out of 50 candidates who completed a questionnaire containing open and closed questions. These were completed immediately after two selection events held at one university.

Outcomes: The Health and Care Professions Council have recently added the requirement to involve service users and carers in education programmes. Findings revealed that involvement of service users in the selection of students was generally viewed as positive. Benefits were identified for the profession, the candidates and for the service users.

Discussion: Candidates taking part in selection events for a place on a course in diagnostic radiography thought that service users can be involved in a positive way in the selection of students. Service users can act as representation of the general public in ensuring that trainees are of a high standard. Candidates thought that it is good to get an opinion from a different perspective and it helped them to feel confident that they were assessed fairly and equally.



They thought that the service user will look at candidates as an individual and pay attention to the person rather than academic ability. Further evaluation is required to identify issues around this practice.

P169 A simple classification system for the evaluation of trauma imaging examination complexity

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Directorate of Radiography, University of Salford

Aim: This presentation will provide an insight into the categorisation of examination complexity developed as part of an ethnographic investigation in to trauma radiography.

Content: As radiographers we work with a diverse client group with wide ranging needs for examinations which vary in complexity. As educators we must evaluate the student's ability to conduct a wide range of examinations and this process is typically staged over three years of an undergraduate programme with assessment in practice and simulation gradually moving from routine to complex as experience is gained. It is not clear from the literature how differentiation between routine and complex cases is achieved in radiography practice and thus how we ensure that the assessment of students is appropriate for their level of study and experience. With reference to the evidence base a simple classification process was devised to help categorise examinations into one of three groups: routine, intermediate and complex.

Relevance: While at present un-validated this system could be used to ensure that imaging examinations undertaken by students as part of the assessment process are matched to the skills required at each level of study i.e. students are not assessed on examinations or scenarios at too advanced a level for their current skills.

Outcomes: A categorisation tool has been developed which may be used to ensure that students are assessed conducting examinations of appropriate complexity for their level of study.

P170 Training and developing a competent and flexible workforce for DXA services

[Elaine Hamnett](#); [Wendy Wilkinson](#)

InHealth Group

GP referrals for DXA scanning are increasing in response to NICE guidelines for prevention and management of osteoporosis and the inclusion of a diagnosis register in the Quality and Outcomes Framework (2012/13).

We currently provide c.7,500 DXA scans per year across 8 locations. To train the workforce necessary to meet growing demand we established a competency framework and training programme accessible for clinical assistants as well as radiographers.

Individuals in our diagnostic departments who express an interest initially shadow a competent practitioner to understand the techniques and patients pathways. Theoretical content and practical training is delivered by a clinical lead who is also competent to report scans and supplemented by course materials. Trainees complete a log book of 50 scans under supervision. Competency is assessed to confirm technical knowledge including radiation protection, quality assurance and H&S, patient care, anatomy and positioning, data analysis, understanding of conditions and clinical risks, and ability to answer patients' question and problem solve. Training can be delivered to individuals or groups on demand.

In the past 5 years we have trained 5 radiographers and 5 healthcare assistants. Candidates complete the course in less than 6 months.

Our programme helps develop a competent DXA workforce. We are able to offer skills and career development to individuals and an effective use of human resources in multimodality settings. This programme ensures our service is resilient, flexible and planned for succession. It has a growing relevance as the use of DXA increases in response to national guidelines and incentives.