

of report. A sample of patients with normal studies was selected and the notes retrieved to see if the patient was discharged immediately following the receipt of the results of any investigation.

The results showed that over 95% of all inpatient request for complex investigations were performed within 24 hours and that receipt of a normal radiological investigation often did not mean early discharge for patients.

The conclusion in our establishment is that radiology performs the vast majority of all investigations on in patients within 24 hours and is rarely the cause of delay in the treatment or discharge of in patients.

P-134 A prospective audit into radiology requesting in an acute medical unit: Are imaging requests being processed within the recommended timeframe?

[Teresa Jacob](#)

Basildon and Thurrock University Hospital

Imaging is a key part of the assessment, diagnosis and management of acute patients. Our hospital provides clear guidance, in the form of a service level agreement (SLA), on the time frame for acquiring imaging and receiving a formal report for in-patients. A prospective study assessing the time delay between decision to image and imaging taking place over one week within the acute medical unit was conducted. 38 requests met our criteria, 71.1% of requests were not delivered to radiology and 86.8% of scans were not conducted within the recommended time frame. The reasons for this include; a limited number of junior doctors and porters on a 50 bed ward; and an overstretched radiology department.

The service provision within the hospital is clearly insufficient to meet ideal targets. To improve the quality of care, our hospital intends to implement a formal traffic light triage system on all imaging request forms. This aims to ease pressure on the radiology service and expedite patient care.

Professional training and education

P-135 Self-assessment = autonomous learner?

[Alexandra Partner](#)

School of Health and Social Care, University of Derby

Aims/objectives:

To identify the benefits and challenges to students who use self-assessment.

To identify a change in attitudes and behaviours of students who use self-assessment.

Content: What has the reaction been like to self-assessment, have attitudes changed? Take a look at the advantages and what skills this is giving the student and how it's preparing them for the future. We must also consider the limitations and barriers to a change in radiography education.

Relevance/impact: As a higher education institution offering a diagnostic radiography programme, our aim is to provide suitably qualified, confident students that can take on new challenges and have the confidence to practice autonomously out in the work place. With the introduction of self-assessment, it forces students to take responsibility for their work, to be honest, to self-evaluate and to consider improvement.

Outcomes: With newly qualified radiographers expected to be independent autonomous practitioners, we as educators must make sure we are pushing students further and giving them the confidence and skills to start their first post. Getting students involved in self-assessment is just one area that has aided in doing this.

Discussion: How can we develop this further? Trial self-assessment in clinical practice and consider this style earlier on in their studies. How the development is measured eg. NSS, module feedback and module results.

P-136 An observational study of intercultural communication in diverse professional learning groups

Leslie Robinson; Rob Higgins; [Peter Hogg](#)

School of Health Sciences, University of Salford

Aims: Facilitated by Erasmus, for three weeks during August 2013, the University of Salford hosted a unique programme for student and qualified radiographers. 67 students and tutors from UK, Switzerland, Norway, Portugal and the Netherlands participated. The programme engaged 6 multicultural groups to complete 6 different research experiments. By mid-November each group had prepared an article for journal submission.

This poster will concentrate on the interactions in one Erasmus group undertaking their research task. The aim was to explore the influence cultural diversity might have on group collaboration and learning goal.

Content: Three hours (2 learning episodes) of observational video data are reported using the Rapport Management framework of Intercultural Communication which considers the competing demands of 'face', 'interactional goal' and 'group rules/roles'.

Relevance/impact: To inform tutors facilitating short-term intercultural learning groups by identifying potential barriers to learning.

Outcomes: i) No intercultural pragmatic failure was apparent ii) For one, limited English language skills held her back for fear of face loss, others struggled with English when task discussion became complex. iii) Team working was not evident and there was no allocated leader. There was no delegation of tasks. This manifested in lack of role clarity and disengagement. iv) The group was goal-oriented, succeeding in this regard, however goal was prioritised over social interaction.

Discussion: The group dynamics of short-term multicultural groups require careful management. Establishing roles is important as is encouraging social interaction.

P-137 Partnership working: Changing cultures and winning awards

Sherrie Mokrian; Lucy Bond; Jane Cremer; Sarah Durkin; Richard Solomon; [Sophie Willis](#)

Royal Free London NHS Foundation Trust

Background: Radiography education programmes can effectively address the needs of students and consequently service users by ensuring that academic and clinical aspects of programme delivery are harmonised. Establishing effective working relationships can be demonstrated to have a multifaceted positive impact of all stake holders. Such benefits range from more positive student learning experiences during clinical placements; leading to reductions in attrition and increases in retention. For staff, working alongside motivated and engaged students fosters a supportive environment where teaching and learning can flourish. Equally, service users benefit from informed staff and students working together collaboratively to provide the highest possible standards of care.

Aim: Over the course of an academic year, new support structures were implemented to support both staff and students within an imaging department. Clinical and academic colleagues liaised closely to increase communication and promote positive learning and teaching experiences, often within a much pressured clinical environment and espouse a supportive learning culture.

Outcomes: This presentation will detail the positive changes in culture arising from both staff and student feedback as a result of the establishment of a new team of student coordinators within a diagnostic imaging department. Examples of successful learning initiatives and strategies within different areas of the department will be explored from both staff and student perspectives. And finally, to reflect on the success of being named regional 'team of the year' for the transformative learning culture changes that ensued as a result of a more effective working relationship between academic and clinical partners.

P-138 Overview of a European summer school for diagnostic imaging research

Leslie Robinson; [Robster Higgins](#); [Peter Hogg](#)

School of Health Sciences, University of Salford

Background: Radiographers have a poor tradition of publishing quality research. European funding (€67,000) was acquired to subsidise a unique 3-week residential research summer school to give student radiographers, and other professionals (eg biomedical scientists), experience of conducting team-based research, in order to demonstrate its value and highlight research as a potential career pathway.

Aim of poster: Describe the summer school.

Content: 67 students/academic staff from 5 countries participated, the majority were radiographers. 6 teams conducted research under laboratory conditions. Research focus was the optimisation of x-radiation dose and image quality. Research commenced 2 months prior to the residential component; it was completed within 6 months. The teams designed methods, collected/analysed data and wrote papers for journal submission. Several socio-cultural activities were organised to improve team cohesion and intercultural understanding.

Outcomes: Several multi-author papers were submitted to journals - six 'empirical research', three 'relevant literature reviews' and two 'qualitative evaluations of student/staff experience'. Questionnaire evaluation was highly positive for academic and social components. Funding (€67,000) has been awarded for a second pan-European research summer school.

Discussion: Our summer school lasted 6 months, with a 3 week intensive residential component. Participants, for the first time, engaged in team-based research under the supervision of an experienced principal investigator. Participants engaged in the complete process - from inception through journal peer review to publication. We believe this experience provides a comprehensive and realistic experience of research. Radiographers need to be more active in publishing research and innovative approaches like ours need to be considered.

P-139 An evaluation of interactive sessions involving radiography students and a simulated patient

[John Huckle](#); [Ann Westmoreland](#); [Susan Devine](#)

Faculty of Medicine and Health, University of Leeds

Background: The School of Healthcare, University of Leeds has adopted a workshop model involving simulated patients which has been used by the Faculty of Medicine, University of Leeds. This paper addresses the educational benefits for radiography students of workshops involving simulated patients in specific radiography professional scenarios, as part of their Diagnostic Imaging Technique module.

Aim: The aim of the workshops is to improve communication and interpersonal skills.

Method: Two second year radiography students volunteered to take part in two different radiography scenarios with a simulated patient (one student in each scenario). Following each scenario, the volunteer reflected on things they did well and things they would do differently next time. They shared this with the whole group and workshop members gave constructive feedback. Student feedback was obtained using questionnaires after both scenarios were completed.

The same scenarios were repeated the following day with a different group of radiography students, but with the same simulated patient.

Conclusions: Generally, students found the sessions useful, allowing them to strengthen areas of weakness in their interpersonal skills and learn from others' feedback. The feedback given from the simulated patient was found to be very helpful.

It was suggested that the sessions could be improved by having smaller groups and more simulated patients, so that more people can be directly involved in the scenarios.

P-140 Integration of person centred care in radiography education

[Louise Mifsud](#)

Robert Gordon University, Aberdeen

Aim: To experience a day in the life of a service user/supported person.

Objectives: To observe a range of activities experienced by the service user. To assist (where appropriate) with the needs and caring of the service user in co-ordination with the service user and their families/carers. To discuss the experiences of interactions with the health service. To identify any issues experienced (or potentially be experienced) with the radiography department.

Content: A discussion of the development/integration of care provision and empathy within challenging environments in radiography education. A unique opportunity, the service user (supported person) experience (SUE), is undertaken by each diagnostic radiography student during stage 2. Evaluations of student perceptions/experiences were conducted.

Relevance/impact: To prepare students for a range of challenges they can encounter and to gain an understanding of the complex and multiple issues experienced by people in their everyday lives and within a health context. Students reflected on the experience and considered changes in future practice.

Outcomes: Pre SUE most students expressed a positive anticipation with some low levels of anxiety due to the unknown element. Post SUE students gained more confidence in dealing with challenges and expressed a greater range and depth of empathy and care for their person. ☒

Discussion: By placing students with a person outside the hospital environment it helps to personalise the experience. It should have a lasting impact on the student and how they deal with people with chronic conditions within the imaging department.

P-141 Modelling the migration patterns of radiography undergraduates

[Chris Wright](#); [Sarah Naylor](#)

Sheffield Hallam University

Research aim is to identify the geographical impact on students entering Higher Education and upon qualification, to explain the emerging patterns, and to model their impact. A quantitative study investigated 2012 graduates from all UK Universities offering undergraduate Radiography education.

For every 100 students who enter University, 53 will still live in the local area at the point of first post-employment. Only 2 return to their primary location having moved away to study. Of the 24 students who moved away to study, 17 will gain employment close to their University location. 30 students will ultimately reside in a tertiary location remote from their home or University cities.

The logic for students entering higher education has changed. Traditionally high flying students perhaps sought to attend the best Universities their grades would allow and went on to develop careers with little regard for geography. Today expectations are different with most students attending the nearest University to their home. Finance is the biggest concern. International students who come to study in the UK almost exclusively stay regardless of their University location.

An implication for clinical practice and the NHS is that recruitment of newly qualified Radiographers is likely to continue to be more difficult in areas remote from University cities. This situation is exacerbated in areas where the number of graduates per University is far less than the number of available jobs in that area. Universities are seemingly justified in focussing on local recruitment as this provides the dominate proportion of their cohorts.

P-142 Using social media to promote the radiography subject area

[Emma Hyde](#); [Alexandra Partner](#)

School of Health and Social Care, University of Derby

Aims/objectives:

- To share our experiences of using social media to raise the profile of the Radiography Subject Area .
- To illustrate how social media can be used promote a team's authority to teach, and support recruitment.

Content: The Radiography Subject Area Facebook page was launched in January 2013. It was designed to raise our profile with potential students, current students, and stakeholders such as clinical partners. The Facebook page is used by the team to showcase innovative teaching sessions, and key events that the subject area is involved in. Alongside the Facebook page, a number of staff created their own LinkedIn profiles. These profiles allow staff to showcase their skills & expertise, and create links to work they have done eg. publications.

Relevance/impact: The reach of the Facebook page is proving substantial, with some posts (such as the heart dissection) being seen by over 400 people. The use of LinkedIn profiles has aided in networking by allowing staff to connect with both senior academics within our own institution, and key figures within the radiography profession.

Outcomes: The careful use of social media has many potential benefits to HE programmes, in particular for communication and networking (Jadu, 2009). As such it was part of our strategy for 2012-13 to embed social media into our subject area.

Discussion: There are plans to extend the use of Social Media to include a YouTube channel and to look at Twitter, Pinterest and Flickr. Promotion of our Facebook page is on-going.

P-143 Exploring the transition period of diagnostic radiographers during their first three months of practice

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).

Stage one results: Stage one results of the three month interviews will be presented thematically.

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

P-144 Radiology referrals: A call for further undergraduate radiology education

[Nishanth Sivarasan](#)

Royal London Hospital, Barts Health NHS Trust

Background: During foundation years, trainees regularly encounter patients requiring imaging investigations. Current RCR guidelines suggest that every imaging request must be justified. Justification involves considering the risks associated with imaging and proceeding in view of a net benefit. We examined a cohort of foundation year trainees for their competence and confidence in making radiology referrals.

Methodology: Data was collected using printed multiple-choice questionnaires. Questions tested knowledge on relative radiation doses of basic investigations, confidence when making referrals and the choice of imaging modalities for specific clinical scenarios. Subjects were also tested on awareness of radiation regulations. Answers were evaluated with 'confidence' scores.

Results: The study achieved an 81% response rate (57 out of 70). Of the responders, only 1.8% had previously encountered radiation regulations. Only 21% identified the relative radiation exposure from abdominal x-rays; all other subjects significantly under-estimated the associated risk. None of the subjects correctly identified the exposure associated with CT abdomen/pelvis and only 14% knew the exposure from CT chest. On questioning referral experience, 74% admitted to making referrals, on behalf of seniors, without understanding the indication. A further 58% were unsure of the information required by radiologists for successful referrals.

Evaluation: Results demonstrate an alarming shortfall in confidence and basic radiation regulations amongst junior trainees. Further education is required at undergraduate level, to help junior doctors appreciate the risks associated with routinely requested radiology studies and to help develop an understanding of the indications for specific investigations.

P-145 Reporting by radiographers - computer tomography examinations of the head

[Paul Lockwood](#); [Keith Piper](#)

Canterbury Christ Church University

Aim: To present the objective structured examination (OSE) results of the four cohorts (n=23) who have successfully completed a postgraduate programme (accredited by the College of Radiographers) which prepares radiographers to report computer tomography (CT) neurological investigations of the head.

Method: Twenty five CT investigations (prevalence of abnormal cases 48% n=12, normal 52% n=13) were used in the OSE which included the following abnormal appearances: traumatic haemorrhage/hematoma (acute/chronic) infarction (acute/chronic), degenerative conditions, and tumours (glioma, meningioma, and metastases). The radiographers indicated if the appearances were normal or abnormal and provided a description and interpretation of any abnormal appearances. Responses (n=575) were compared to the expected answers previously agreed with a three consultant radiologists / external examiners. Sensitivity (Sn) and specificity (Sp) rates were calculated on the normal/abnormal decision and the total percentage agreement rates were calculated using a pre-determined marking scheme.

Results: The twenty three radiographers who successfully completed the postgraduate training correctly identified the abnormal cases (Sn=99.3%). The % rates (and 95% Confidence Intervals) for specificity and agreement were 95.6% (93.1- 97.7) and 90.7% (88.1- 90.8), respectively.

Conclusion: These results suggest that this group of radiographers can report CT neurological examinations of the head to a satisfactory level of competence to be of benefit to clinical departments committed to achieving recent guidelines. Further work is required to confirm the clinical application of these findings.

P-146 How advanced is our advanced practice? A survey of reporting radiography practice in England

[Victoria Ballard](#); [Siobhan Dallibar](#); [Anita Montague](#)

Brighton and Sussex University Hospitals NHS Trust

Aims/objectives: To evaluate the scope of reporting radiography practice in NHS England.

Content: Questionnaires were sent to the Imaging departments of all acute NHS England hospitals regarding the structure of their reporting radiographer service and relevant associated governance measures.

Relevance/impact: Demonstration of the current situation can be used to benchmark individual Trust progress with advanced practice in this field and inform workforce development programmes.

Discussion: Suitably trained and experienced radiographers have been shown to be as effective at radiographic reporting as radiologists, initially MSK imaging progressing into CXR/AXR. This role is now being further expanded to include cross-sectional imaging although the uptake of this is varied across the country.

P-147 When are specialist registrars worth their weight in gold?

[Derfel Ap Dafydd](#); [Aroon Baskaradas](#); [Shabnam Bobdiwala](#) [Bobdiwala](#); [Muhammad Saleem Anwar](#); [Iain Southerland](#); [Jeremy Levy](#)

Imperial College Healthcare NHS Trust

Introduction: In this challenging economic climate, we examine the value of specialist registrars. With various changes in training and medical practice, there is the perception that they are less valuable than they were.

The primary purpose of this study is to broadly quantify the service contribution made by registrars in various specialties, across a range of clinical activities - allowing for degrees of consultant supervision. We also explore the financial value of these activities to the trust.

Methods: 5 investigators (all specialist registrars), collected responses from trainees sampled from all main specialties, using a specifically designed questionnaire.

Results: A total of 66 responses (16.8% of the Trust's SpRs) were collected from from 39 specialities. Responders reported that on average they are autonomous in 51% of their overall clinical activities. Those involved in outpatient clinics do an average of 2.7 clinics per week, seeing 48% of the clinic's patients. Trainees spend an average of 3.5 sessions a week conducting ward work, 62% of which they perform without direct consultant supervision. Surgical trainees spend an average of 3.6 sessions a week in theatre and perform 54% of the operations independently.

Conclusion: Our data shows that registrars are integral to all clinical areas and uniformly spend more than half their time practicing autonomously. They offer considerable value to NHS trusts, presently costing their employer only an on-call supplement in wages. This survey also potentially offers a frame of reference for future analyses, and even trainee appraisal and comparative analyses at other trusts.

P-148 Establishing a postgraduate MRI training programme: 5 year review

[Sylke Grootoink](#); [Wendy Wilkinson](#); Gill Winter; Lizzie Rhodes James

InHealth Group

We have developed a postgraduate MRI training programme which provides a valuable supply of trained and experienced radiographers to the healthcare workforce whilst also providing a personal career development path. Our programme was initiated in the context of a shortage of competent MRI radiographers, an increasing demand for the modality and the requirement for services to operate for extended hours.

The 15-month work-based training is interspersed with relevant taught elements and structured around a MRI competency assessment framework which is well embedded in our organisation. Based at one of our MRI centres, trainees carry out practical training under the supervision of experienced senior radiographers. Each trainee is supported by a workplace coach and professional mentor and has a personalised training and development programme.

Trainees develop robust knowledge and skills to increase their ability in performing 'right first time' examinations. As the programme is conducted in a real world environment, students develop additional skills in problem-solving, service efficiency, decision-making and multidisciplinary team working. Students on the programme develop a strong sense of loyalty to their department and to the organisation. This has benefits in terms of improving retention and reducing the overall cost of recruitment and staffing.

An in-house training programme makes us more self-supporting in skills development and allows newly-qualified radiographers to be exposed to a broad range of clinical activity. We will present the challenges of establishing the programme and key lessons learned from 5 years experience, as well as the learning and career outcomes of the trainee cohort.

P-149 Student perception of performance post recorded diagnostic radiography clinical simulation

[Louise Mifsud](#)

Robert Gordon University, Aberdeen

Aim: To evaluate the effect of giving students access to digital footage of their performance during a diagnostic radiography simulation to supplement the existing feedback process.

Objectives:

- To ascertain if providing digital footage to the student has an impact upon their perception of their performance in the simulation.
- To explore if viewing the digital footage has an impact upon the process of reflection post simulation.
- To explore if the student feels differently about the simulation having had the opportunity to watch the footage following the simulation.
- To explore if the students place any value on receiving their digital footage.

Content: Clinical simulation with patient volunteers has been integrated into the diagnostic radiography (DR) program in Year 1.

Relevance/impact: Feedback is recognised as the most important aspect of clinical simulation. The combination of face to face feedback with the opportunity to view the video footage was to improve student confidence and to facilitate their reflective process.

Outcomes: All students had a more positive perception of their performance post viewing their individual recorded clinical simulation.

Discussion: The potential stress of the simulation can mask the student's abilities; therefore the opportunity to view the simulation at a later date can enable the student to be more objective of their own performance.

Student comments revealed that viewing the video footage helped to reinforce errors realised at the time of the simulation as well as recognise the positive aspects of their performance.

P-150 Does simulation enhance the experiential learning of diagnostic radiography students?

Ruth Wilkinson; Jennie Swift

Rotherham NHS Foundation Trust; Sheffield Hallam University

Aims: Technology enhanced simulation training is one of the latest learning, teaching and assessment tool available to educators. This study aims to identify strengths and weaknesses of this learning tool when preparing diagnostic radiography students to be able to work as part of a team during a medical emergency.

Methodology: Simulations were based upon individual and team training needs, previous critical incidents and national standards of care. Participants were introduced to the concept of simulation through an informal talk, which explained that simulation was to provide a more realistic learning experience in a safe environment. Three students on clinical training placement agreed to take part. Their experiences were assessed by means of a reflective diary, completed immediately following and 4-6 weeks post simulation.

Outcomes: Initial findings indicate that two students experienced a strong emotional response when the patient's distressed wife appeared demanding to know what was happening. This is an interesting point as human distress caused distress in the team. The mannequin did not elicit the same emotional response.

Relevance/impact and discussion: Providing a clinical atmosphere allows the students to practice their skills in a more realistic setting with real time pressures. By introducing actors, students can identify their own possible emotional triggers and then develop coping strategies to deal with situations, that they as individuals, find physically and emotionally stressful. Increased self-awareness may enable individuals to care for their patient and their relatives more effectively when next placed in this situation.

P-151 Death and dying - are students prepared?

Alexandra Partner; Kirsty Wood

University of Derby

Aims/objectives:

- To understand what students expectations are;
- To explore possible ways of delivering focused, curriculum based activities based on actual need.

Content: It is inevitable that radiography students will encounter death and dying patients during their pre/post registration experiences. Currently the extent to which students are adequately prepared for these encounters is unknown. Potential changes to the curriculum and how these may be delivered most effectively have yet to be explored.

Limited practical preparation is undertaken with regard to dealing with the emotional impact of these situations. Current curricula concentrate on clinical and administrative procedures rather than professional supervision and reflection.

Relevance/impact: Through personal tutor discussions and curriculum reviews, it has been identified that students have raised the issue of struggling to cope or feeling upset after these experiences on placement. With the care and compassion on the national agenda, we as educators must look at how we can implement this into the programmes. Addressing how students are prepared for dealing with these situations could not only help with retention figures but make a more empathetic healthcare professional.

Outcomes: A review of this topic within our school of health has led to a research proposal being devised to explore student's perceptions of their preparation for and expectations of dealing with death and dying patients.

Discussion: What is the best form of delivering of such topics, should it be introduced through an inter-professional learning approach?

P-152 An analysis of the student and tutor experience of an Erasmus funded residential research event

Robert Higgins; Leslie Robinson; Peter Hogg

School of Health Sciences, University of Salford

Aim: To explore the experiences of students and tutors who participated in a residential Erasmus funded residential 3 week research event during August 2013.

Content: Two semi-structured focus groups (student and tutor) were conducted to explore participant experiences. Both focus groups lasted 60 minutes and were audio recorded. The recordings were transcribed and coded to identify the main themes.

Relevance/impact: This was a unique event that engaged radiography, physics and biomedical students and tutors from the UK, Switzerland, Norway, Portugal and the Netherlands.

Outcomes: Students and tutors considered the residential summer school as a positive experience, especially with regards to collaborative learning. It was also seen as an opportunity to undertake research and share knowledge.

Discussion: A number of recommendations are suggested to ensure the success of future research-based Erasmus-funded multi-cultural and multi-disciplinary programmes:

- Tutors and students should have clarity about the primary research objectives.
- Tasks may take longer than expected with international and inter-professional groups; therefore allow extra time to complete research or learning tasks.
- The group size should be no more than 10 students, with at least two tutors per group to facilitate activities.
- Group work activities should commence as early as possible, preferably in the first week to help galvanize the group.
- Welcoming and social events help students and tutors to network, communicate with one another and facilitates group working.
- Lectures should be aimed at the appropriate level (undergraduate), not be too complex or unnecessarily long and relevant. Otherwise students will lose interest.

P-153 The utility of applications (Apps) in the radiography curriculum: A baseline survey of student opinion

Penelope Bell; [Jane Harvey-Lloyd](#)

University Campus Suffolk

Introduction: Hundreds of applications (Apps) are available for multiple platforms. Many students appear to own smartphones or devices as they are seen in classrooms by teachers on a daily basis. Harnessing familiar resources is cost effective, accessible, likely to be successful and student centred. This project aimed to discover through an online survey, the attitude and views of student radiographers regarding the use of devices, and potentially Apps, in the classroom.

Method: A questionnaire was developed on SurveyMonkey and emailed to all Diagnostic and Radiotherapy students registered at UCS. The survey questions included familiarity of device use, previous App use and attitudes toward potential inclusion of Apps as an optional classroom resource in the future.

Results: 118 (61%) of students responded from a total of 193 radiography students. 91% (n = 107) of respondents had used an App and 80% would like Apps to be suggested for modules.

Discussion: The response rate for the survey was very high. Almost all students had experience using at least one App. Comments were favourable to the idea of apps supported by faculty and most students wanted the option of suggested Apps for classroom learning to be taken forward. Many centres have provided students with a device in order to evaluate Apps use but that is temporary and lacks full commitment if the device is later to be returned. This project is practical in its approach of utilising currently available resources, fully familiar to the student, therefore more likely to succeed and be sustainable.

P-154 What, where, and how; a proposal for structuring preliminary clinical evaluations

James Harcus; Chris Wright

Sheffield Hallam University

The vision of the Society and College of Radiographer's to introduce commenting skills as a competency for Radiography graduates by 2010 has passed relatively unanswered. However, there are renewed calls for 'preliminary clinical evaluations' to be integrated into the training of new Diagnostic Radiographers (SCoR and RCR, 2013).

Aim: This paper looks to implement a method for structuring preliminary clinical evaluations (comments) in acute musculoskeletal trauma within an undergraduate training program. It outlines a simplistic but comprehensive method of constructing comments by students. Introduced early in the program, this will incorporate an understanding of common injury types, anatomical knowledge, and medical terminology into a product which is both accurate and informative for an acute clinical situation.

The method consists of:

- What is the abnormality?
- Where is the abnormality?
- How is it displaced?

Discussion: Used within the classroom and clinical practice setting it can enhance student understanding of theoretical concepts, and is readily open to assessment to demonstrate accuracy of diagnosis and content. The structure allows students to break down appearances into components and make sense of even complex traumatic radiographic findings, instilling a feeling of competence and understanding.

Practices of commenting in imaging departments appear not to have widely overtaken the traditional 'red dot' system as is the SCOR's aim. Producing graduates with these skills embedded will hopefully augment this transition.

P-155 The patient experience - are you getting it right? The use of scenarios to emphasise the importance of interactions within the clinical setting

Georgina Howie; Caroline Blower

NHS Ayrshire & Arran

Aims/objectives: To use scenarios to assess patient/radiographer interactions with focussed questions enabling proactive discussion on clinical practice.

Content: Evaluation of need - all other aspects of radiographic practice are assessed either pre registration or through peer review or audit. Although small numbers, the majority of complaints received pertain to the patient experience and it became evident that this aspect is never assessed.

Initial intent was to record actual patient experience however this was not possible. Therefore clinical simulation (filming) was used followed by several editing sessions.

The scenarios were piloted with small groups of staff so an evaluation of the subsequent discussions could take place. An evaluation form was also developed for participants that led to improvement of the focussed questions.

Discussion of current progress and future developments.

Relevance/impact: Scenarios were tailored to include appropriate patient care, radiographic technique and professional behaviours; in line with Quality Strategy (Scotland) and the Board's Organisational Values.

Organised discussion groups resulting in heightened awareness for Radiographers of the impact of professional behaviour when dealing with patients and colleagues.

Radiographic technique review for Continuing Professional Development Portfolio.

Outcomes: To improve radiographer awareness of:

- The effect of poor quality interactions with patients
- Routine application of clinical effectiveness
- The implications of poor radiographic technique
- Received suggestions for further scenarios from staff
- Developing for LearnPro (on-line learning resource)
- Develop Assessment Criteria in line with Quality Strategy (Scotland) for participant assessment

P-156 Peer review in mammography - an essential part of learning and development

[Laura Starr](#); [Claire Mercer](#)

University Hospital South Manchester

Aims/objective: A fundamental part of the National Health Service Breast Screening Programme (NHSBSP) is Quality Assurance (QA). The aim of QA in the NHSBSP is 'to maintain minimum standards and to improve the performance of all aspects of breast screening in order to ensure that women have access to high quality breast screening service'.

Aim: To develop and implement a robust, structured peer review system in line with NHSBSP QA standards.

Content: Develop peer review system that encouraged reflection, discussion and problem solving. Review of developed peer review sessions with information gained used to motivate individuals to acknowledge gaps and set goals. Important tool for learning; recognise the need for regular monitoring and review to be effective.

Relevance/impact: Implementation of structured peer review will take time to establish into practice. Initial feedback from team members is very encouraging. To develop in other NHSBSP units.

Outcomes: Commencement of sessions was established. Sessions have involved:

- Open critique, discussion and analysis of 10 mammograms (different mammograms at each session).
- Practitioners document findings on image analysis form.
- Key discussion points consolidated and fed back to the practitioners through feedback report and copy of the image assessment sheet for CPD use.
- Feedback reports monitored for key themes/ trends and further training needs identified.

Discussion: Being responsible for managing a screening service goes hand in hand with inherent systematic QA processes; one of which is ensuring that staff are aware of their own standards of proficiency and how those standards relate to those of their peer group and standards required by the NHSBSP. Following implementation of this new system we will continually monitor and update the process.

P-157 Investigating the use of positioning and lead shielding to reduce gonad dose in lumbar spine examinations

[Sarah Simpson](#); [Andrew Tootell](#)

University of Salford

Under the ALARP principle any acceptable method which would reduce dose to the patient should be utilised. In the case of lumbar spine examinations, which carry a high associated dose, there has been very little research in to how to optimise dose to the patient.

Thermoluminescent dosimeters were positioned within a dosimetry phantom at locations corresponding to the male and female gonads. The lumbar spine was imaged in the antero-posterior and posterior-anterior, with and without the use of gonad shielding on the tube side of the patient.

The results showed that for both males and females the PA position had a significant effect with a reduction from 0.0135mGy to 0.0035mGy for the testes and a reduction from 0.4555mGy to 0.131mGy seen in the ovaries. For female patients the lead shielding had no significant effect on the dose to the ovaries as it could not be placed directly over them as it would obscure required anatomy. For male patients the use of gonad shielding did have a significant effect in the AP position when used on the tube-side of the patient, with a dose reduction of 0.01mGy.

The results obtained recommend the use of PA positioning in both males and females, where the patient's condition will allow it, and recommends using gonad shielding on males in both the AP and PA positions.

P-158 The rules of the game

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Aim: Using Bernstein's theory of pedagogic discourse to explore how student radiographers determine whether radiographic images are normal or abnormal.

Content: A study focusing on third year student radiographer's image interpretation abilities using Bernstein's educational theoretical framework as an, in-depth analytical method to illuminate the tacit rules that underpinned their interpretive decisions.

Relevance/impact: Many higher education institutions have incorporated image evaluation skills into their pre-registration courses, ensuring that their students have acquired and developed these skills before graduation. Bernstein's framework can be utilised as a data analysis instrument providing educators with a deeper insight into the challenges that their students face when applying notions of normal or abnormal.

Outcomes: The students accurately produced notions of abnormality contingent with their learning environment across case 1 revealing their acquisition of the recognition and realisation rules. However, when presented with a more challenging image (case 2) weak realisation rules authorised some of the students (n=5) to deviate from legitimate meanings despite being empowered with the recognition rules.

Discussion: Bernstein's theory highlights two types of tacit rules embedded in the student's interpretations. Recognition rules, said to determine 'what' legitimate meanings (ie. trauma characteristics) might be put together, and realisation rules, which determine 'how' these meanings are put together during normal vs. abnormal. The recognition and realisation rules are useful for identifying whether students have acquired 'the rules of the game' and understand what is required of them to carry out a competent interpretation of an X-ray image.

Computer assisted detection/diagnosis and image perception

P-159 An investigation into perceived image quality by the application of colour scales to chest radiographs

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Introduction: Despite the concept of colour radiography first being brought about in 1951 and the great advances that have been made in modern digital systems, with their ability to manipulate data post exposure, little research has been undertaken in to the application of colour scales to medical radiographic images.

Methodology: Three sets of twenty four chest radiographs, one with an inverted greyscale applied, one with a fire scale and one with an inverted fire scale were compared against their greyscale equivalents by eight radiography students at the end of their final year of study and marked for specific image quality criteria using a five point Likert scale.

Results: Overall, the inversion of the greyscale was perceived to enhance the image quality the most, yielding an average score of greater than three for six out of seven of the image quality criteria, with a p-value of <0.05 being returned for four out of those six criteria . However some of the participants did favour the fire scale and inverted fire scale for specific image quality criteria.

Conclusion: The application of varying scales to chest radiographs can be used as a useful adjunct to traditional greyscale in the interpretation of chest radiographs.

P-160 Iterative reconstruction for CT pulmonary angiograms: A phantom study to investigate potential dose reduction

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Aims/objectives: To establish whether iterative reconstruction (IR) algorithms can be applied to CT pulmonary angiogram (CTPA) examinations enabling radiation dose to be reduced whilst maintaining image quality.

Content: A retrospective review of CTPA image quality was conducted to establish baseline quality. A phantom study was then conducted using an anthropomorphic chest phantom with a contrast enhanced artificial main pulmonary artery inserted.