



P214 What effect does decreasing the time to report radiographs have on reporting accuracy?

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UHNM

Background: The increasing number of radiographs undertaken along with the introduction of hot reporting appendicular Emergency Department radiographs has inevitably brought about increased pressure on the Advanced Practitioners (AP) raising the concern about the effect on reporting errors. Previous similar studies focused on radiologists, despite it being documented that APs report most of the radiographs within the NHS. Plus: they did not investigate the effect on satisfaction of search (SOS) and voice recognition (VR).

Method: One group of 60 appendicular radiographs were reported by APs within 4 hours and the second within 2 hours. The true and false positives and negatives, sensitivity, specificity, accuracy, positive and negative predictive value were calculated before the P-value to identify statistical significance. The number of SOS and VR errors were calculated alongside the P-value. Results being split into the observation of the acute and chronic pathologies.

Analysis: Initially there was no statistical significance, further investigation highlighted that one participant was faster when allocated more time. With this consideration negative results were statistically more accurate when more time was taken, with both acute and chronic pathologies. It was observed that not all APs discuss the chronic pathologies. No statistical difference was seen when looking at SOS and VR errors. Notably the wrong patient's radiograph was reported when working fast, a 'never event'.

Limitations: It was noted that no participants took longer than 3 hours when given 4 hours, something to be considered in future studies.

Conclusion: Reporting accuracy was improved when more time was allocated to report.

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SHARING BEST PRACTICE

P215 Development of radiographer led on-treatment review clinics, following a competency based framework

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Purpose: To share our experience of developing and delivering Radiographer led On Treatment Review clinics for patients receiving radiotherapy across 2 clinical sites, following a medical model for review, and the projection of how this will work across a 3rd site. The poster follows a timeline of how the service was set up, initially at a satellite centre, the results of a pilot project for implementation of the service at the main hospital site, and follows the development of the service, with expansion of the treatment sites reviewed, and the development of the staff involved.

P216 Feasibility study of one-stop emergency palliative treatments on Halcyon linac

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Background: The Halcyon linac has mandatory imaging as part of patient workflow. It produces high-quality kV-CBCT images up to 24.5cm long and 49.1cm wide. Emergency palliative patients (e.g. cord compressions) are usually scanned on a CT scanner, wait for a plan to be completed, and are then treated on a linac, requiring moving a patient onto two separate couches. A workflow is considered where localisation and treatment are both done on the Halcyon, thereby reducing patient re-location.

Method:

- The process was developed using a thorax phantom
- A plan with a field is prepared in advance on a separate phantom
- A kV-CBCT scan of the phantom is obtained on the Halcyon
- In Eclipse, the kV-CBCT has a body contour applied where the density is forced to water
- The prepared plan has the kV-CBCT assigned to it, and the field altered for appropriate treatment
- An MLC-based irregular surface compensator is created to flatten the Halcyon 6MV FFF beam
- The plan is exported to RadCalc for MU check
- After review and approval, the plan is used for treatment.

Results: Using a phantom, all the steps from the start of the localisation scan to the end of treatment beam delivery can be completed within 15 minutes.



Conclusion: Allowing for other steps, such as patient alignment and approval by a clinician, it is anticipated that a 30-minute Halcyon appointment should be sufficient, minimising inconvenience for cord compression patients. Further work will include developing the workflow, and calibrating the kV-CBCT scans for heterogeneity corrections.

P217 Emergency physicians request far too many trauma scans - or do they? Implementing a trauma scan request pro-forma in a regional trauma unit

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Background:

- At the Royal Oldham Hospital, a regional Trauma Unit, a new trauma scan request pro-forma was introduced in November 2017, which allows emergency physicians to request a whole-body CT scan without the need for the request to be vetted by the on-call radiologist.
- However, trauma scans expose patients to high radiation doses and create immense reporting volumes for radiologists.
- We wanted to assess whether the implementation of the new trauma scan request pro-forma has increased the total number of trauma scan requests and reduced the request-to-scan time.

Method:

- We analysed the number of whole-body CT scan requests in October 2017, December 2017 and December 2018.
- Furthermore, we also assessed how many of those scans actually had positive trauma related findings.

Results:

- In October 2017, 31 whole-body scans were requested. In December 2017 and 2018, 21 and 19 whole-body scans were requested respectively.
- The median request-to-scan time was 40 minutes, 82 minutes and 20 minutes in October 2017, December 2017 and December 2018 respectively.
- In October 2017, only 32.4% of all whole-body scans had positive trauma-related findings, whereas in December 2017 and 2018, 55% of all whole-body scans had positive trauma-related findings.

Conclusion:

- In this snapshot analysis, there was no evidence of increase in the number of trauma scan requests since the implementation of the physician-led trauma scan request pro-forma.
- The implementation of the trauma scan request pro-forma appears to have increased the probability of detection for trauma-related findings.

P218 An audit into the clinical appropriateness and diagnostic yield of AXR requests in the emergency department

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Background: The abdominal X-ray (AXR) is an investigation with low diagnostic yield, yet remains commonly requested in the emergency department. In addition to the limited clinical value, financial and patient safety factors need to be considered with their continued use. We aim to assess the clinical appropriateness of AXR requests in the emergency department and the overall contribution to patient diagnoses.

Methods: We conducted a prospective study of 100 random AXR requests in a single month, pre and post intervention, and collected data on demographics and clinical details to assess the appropriateness and diagnostic yield of these requests. Intervention comprised of written communication and posters to inform requesters of our findings, prior to repeating data collection. A request was considered appropriate if it met the Royal College of Radiologists (RCR) list of indications for AXR requests.

Results: In the pre-intervention cohort only 50% of requests were appropriate with 22% of requests demonstrating any significant findings. Post-intervention only 48% were appropriate, however 37% of all requests demonstrated significant findings. When requests were meeting RCR guidelines this becomes 40%, and when inappropriate the diagnostic yield is 27%. Within 72hrs of the initial AXR further abdominal imaging was performed in 25% of all patients.

Conclusion: Adherence to RCR guidelines is associated with a higher proportion of significant findings. Further interventions are required to increase the number of appropriate clinical requests. The contribution of abdominal X-rays in making a diagnosis is unclear where one quarter of all patients proceeded to further abdominal imaging.

1. iRefer Guidelines RCR Version 8.0.1 (2017)



P219 Blinded by the binder - a need to change existing trauma protocol

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Background: Clinical review of patient trauma pathway through the imaging department and ensuring only the necessary imaging performed for diagnosis. Collaboration with Accident and Emergency, Orthopaedic teams with the common aim to improve treatment and results for haemodynamically stable patient involved in major trauma.

Aims: This poster aims to:

- Review and redesign trauma imaging pathway
- Examine the need of a pre and post binder removal pelvic X-ray on the haemodynamically stable patient going straight to CT Purpose.

As the largest hospital in Europe there is an increasing number of major trauma referrals. Patients are perceived to be receiving an unnecessary amount of plain film imaging despite receiving "Trauma CT". This raises the question, are we being over cautious in our pre and post pelvic binder removal X-rays when the patient is to be transferred straight to CT? Are we potentially over irradiating the haemodynamically stable patient? Is there potential to create a more efficient patient pathway allowing them quicker access to CT, without being over imaged in Plain film?

Summary: Review and redesign of existing trauma protocol for plain film and wider recognition of going straight to CT may negate need for plain film prior to scan. Points to examine - Pre and post pelvic binder X-rays, is there a need for a pelvic Plain film x-ray in the haemodynamically stable patient prior to going to CT without any delay - How can we streamline a imaging pathway in the trauma patient?

P220 Investigation of weight loss in older adults

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15 to 20% of patients older than 65 are affected by unintentional weight loss. This nonspecific symptom is associated with increased morbidity and mortality. Many patients are over investigated due to clinician/patient fear of underlying malignancy. However, unintentional weight loss in the elderly is multifactorial and in approximately 25% of patients who are investigated no cause is found for the weight loss^[1]. NICE guidelines on the investigation of suspected cancer for primary care state that unintentional weight loss carries a positive predictive value (PPV) of 7%. For this reason, guidance has been provided on the investigation of this symptom^[2]. In the current climate of limited resources, we audited the NICE guidance mentioned above, as well as a review published by McMinn and colleagues (2011).

The aim of this audit was to ensure resources were being used in a sequential fashion, as opposed to resorting immediately to cross-sectional studies. Our results, showed that our institution did not meet the standards for basic investigations before referring on to more expensive tests. For example, compliance with having the patient weight/weight loss/duration of symptom measured and documented accurately in clinic was 82%, 74% and 66%, respectively. Despite patients having normal initial investigations (serum analysis/ CXR/ ultrasound or endoscopy), they went on to have further cross sectional imaging, which did not reveal any malignancy. We conclude that the NICE guidelines on this common constitutional symptom are ambiguous, may result in over investigation, inappropriate use of expensive and limited resources.

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2. National Institute for Health and Care Excellence (2015) Suspected cancer - recognition and referral pathway (update)

P221 Nearpod in diagnostic radiography and education: Student engagement and feedback

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Ulster University

This poster will be a visual display of the way Nearpod has been used so far on the undergraduate Diagnostic Radiography and Imaging course at Ulster University. Multiple licenses for this 'app for active learning' have been held by the teaching team since 2016 and so far it has been positively received by students of all year groups. Samples of quiz results, poll results and student drawings as well as student feedback will be displayed under the headings 'knowing, doing, being', providing a clear demonstration of how Nearpod has been effectively used at various teaching levels^[1].

Quizzes and app-based active learning have both been demonstrated to improve student engagement^[2,3]. It is hoped that this poster will lead to further development of ideas and discussion within the realms of student engagement and how we can encourage this and develop it further within the topic of Radiography. Image 1 displays year-three cohort responses when asked how students could adapt their technique after they watched a video about a patient who lives with dementia.



How can you adapt technique in the future?

What can you do to provide the best care for patients with MS?

Take your time don't rush the patient 0

Talk to the patient throughout the scan to reassure them 0

Reassure patients- maybe have previous negative experience 0

Will they be able to walk in to get scanned or do I need an mri safe wheelchair? 0

Reassurance that the scan is of benefit to them 0

Help move patient onto table 0

Be kind and supportive 0

Additional staff to help patient onto the scanner 0

Reassurance and communication 1

Ensure correct equipment available to make the process as comfortable as possible 0

Be patient and reassuring 0

Will patient be able to transfer onto scanner 0

Talk the patient through the scan before they enter the room 0

Understanding 0

Explain the procedure clearly prior to imaging. Ensure a good rapport with the patient. 0

be more aware of the patients body language 0

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P222 The value of pre-application clinical department visits in radiotherapy

Jenny Callender; Pete Bridge; Cath Gordon; Jo Edgerley

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Background: The mandatory clinical radiotherapy department visit undertaken by potential University applicants aims to provide understanding of the profession and therefore reduce attrition. Increasing pressure on clinical departments makes visits a logistical challenge. This additional requirement may also present an unnecessary barrier to applicants. With no evidence relating to visits, this study aimed to explore the perceptions of both students and clinical educators concerning potential benefits and challenges.

Method: A focus group interview method was utilised to gather in-depth qualitative data concerning the clinical department visit experiences from first year undergraduate students and clinical educators.

Results: Three main themes emerged from the student focus groups: the perceived purpose of the clinical visit, the visit content and the outcomes and impact arising from the visit. Clinical educator data also followed these themes with the addition a "logistical impact" theme.

Conclusion: The clinical visit has value to applicants in affirming their decision to study radiotherapy. There is variation in expectation and content for these visits and they are logistically challenging. Nationally agreed guidelines for visit structure and content could improve visit efficiency and effectiveness. A national clinical visit form may reduce workload for educators and applicants.

P223 ARENA: An advanced education assessment of tumour volume delineation in radiotherapy

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Background: Delineation of radiotherapy target volume has an essential role in modern treatment planning. However, it is affected by intra/inter-observer variations and it has been identified as a weakness in RT planning. For this reason, accurate target volume delineation (TVD) outlining is necessary to ensure optimal tumour coverage. ARENA is a collaborative project among Cardiff University, Velindre Cancer Centre and Singleton Hospital. The project aims at facilitating higher quality and standardised TVD approach through development of tumour site-specific TVD instructional modules and corresponding outlining module.

Purpose: To present and describe the ARENA software to support TVD education and ongoing continuous professional development for clinical oncology trainees and consultants through site-specific TVD modules and qualitative and quantitative feedbacks.

Summary: The training software components currently developed include: a) an user-friendly interface for selecting and importing radiotherapy data to be assessed; b) a viewer to show images and radiotherapy structures contour in axial, coronal,



and sagittal planes; c) an image analysis package to compute quantitative (conformity metrics) and qualitative evaluation (user outline vs. reference volume, maximum and minimum acceptable volumes, over and under contoured regions and a 'red flag' for volumes inappropriately contoured) of the investigator performance; d) training packages and educational material including detailed radiotherapy planning guidance document and details of common TVD errors of pilot clinical sites (oesophagus and prostate); e) a structured report generator that produces a personalised summary of the quantitative and qualitative feedback to the user.

P224 Malpractice, negligence, and litigation in advanced radiography practice setting

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Background: There is no doubt the advanced practice radiographer shoulders more responsibilities and bears accountability for the decisions and actions he takes in the clinical environment. For instance, a reporting radiographer will bear the responsibility for patient's diagnosis and even the outcome of actions taken by others who relied on his report for their patient management decisions. Therefore, advanced practitioners are charged with new duties, exposing them to higher risks of malpractice and negligence claims, liabilities, and other medico-legal issues. Consequently, it has become essential for advanced practitioners to fully understand elements of medical malpractice; reasons why patients may sue and steps to prevent litigations in advanced practice. This paper aimed to examine these issues and the applicable laws of tort associated with medical litigation.

Method: Two major online databases, namely MEDLINE and PubMed, were searched for articles and papers related to the medico-legal issues in radiological settings with a particular reference to advanced practice and radiography. The retrieved papers were reviewed. A number of published textbooks on medical litigation and negligence were also consulted and reviewed.

Results: The reviews revealed a dire dearth of information on medico-legal issues, and showed many radiographers have a poor background knowledge of these issues with regard to the prevailing practices of today's clinical setting.

Conclusion: The knowledge of what could amount to negligence and malpractice, and possibly lead to litigation will help advanced practitioners to take steps to avoid conducts/actions that might lead to malpractice or litigation without resorting to "defensive" clinical practice.

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P225 Survival kit for managing difficult situation in a healthcare setting: Appropriateness of role-plays and simulation exercises

John Paul Sahibbil

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Background: There are still limited studies and discussion that addressed the mechanism of clinical coping for managing difficult situations. Patient satisfaction has become a paramount concern in health care professions, and this is often discussed. However, satisfaction among difficult patients and situations is underreported. With little training and discussions exploring effective ways to manage challenging patients, fatigue, stress and negative emotions often develop among health care providers in the UK.

Purpose: This presentation provides a clear and consistent overview of the importance of patient-centred behaviour. The review also outlines different communication techniques for conflict management and the use of powerful phrases. Additionally, it provides the health care staff with an opportunity to share ideas and recognize their personal traits that influence their ability to



relate with others. The aim of this review is to share knowledge acquired from literature review, disseminating best practices and lesson learnt using the best available evidence.

Summary: Raising awareness for challenging situations in a health care setting is essential to enable providers to reflect on and practice difficult situations or conversation. Self-reflection, preparatory and relational skills, emphatic presence, team approach and patient-centred strategy demonstrate an important kit structure that establishes overall benefits and confidence to healthcare staff. Importantly, healthcare staff favoured this method of support. It is believed that this toolkit improves effective emotional management and a tempting solution for supporting various factors associated with managing difficult situations.

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P226 Exploring peer mentoring in the diagnostic imaging curriculum: What is the experience of the peer mentor and how does this develop graduate skills?

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Background: Peer mentoring is established in the diagnostic imaging curriculum, final year students are allocated to a 1st year student and together they work on an educational (clinical) intervention. This scheme appears to confer benefits to both parties; the 1st year student gains support and guidance from someone with current experience of being a student, while the final year student gains experience of acting as a mentor. However, these impressions are not evidence based; this study sets out to understand the experience of being a peer mentor, in particular looking at this in respect to development of graduate level 'softer' skills.

Method: Using a questionnaire, based on the University's graduate attributes, evaluating at how students rate themselves against these (using a likert scale) before embarking as a peer mentor and post experience of being a peer mentor. Data analysis, using SPSS, paired T test. Qualitative element aims to understand the lived experience from the perspective of the peer mentor, where the questions focus asked of a focus group will concentrate on benefits in terms of 'graduateness' (an appreciative approach).

Results: This research is on-going at present but this paper will report on initial findings around establishing of the peer mentoring relationship, how those relationships are established, some of the barriers and enablers. It will also explore themes emerging from questionnaire data about whether peer mentoring impacts on development on graduate 'soft' skills

Conclusions: Working hypothesis: engaging in peer mentoring develops some graduate level skills but with some caveats for practice.

P227 An inter-professional approach to learning within a Radiology department. Best of both worlds?

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This poster is a qualitative approach following a PSDA cycle of inter-professional approach to Learning within a Radiology department. Historically the training of Radiology registrars at a Trust within the East Midlands has been Consultant Radiologist led. In recent years with the introduction of advanced practice of Radiographers and Nursing staff taking on more medical type roles, the teaching of the registrars in their training has become more of a multi professional approach. This poster looks at how an inter- professional approach to registrar training can enhance the current learning cycle, and yet provide additional learning for the non medical advanced practitioner from the interaction with a medical registrar.

This poster follows a PSDA cycle of learning, supported through inter-professional literature search to suggest that an inter-professional approach to learning allows for appreciation of current roles, opportunities for teamwork and provides a tier approach to radiology registrar learning. This means that the basics of the registrar learning is delegated to an advanced practice non medic to teach, deliver the initial training and then for the registrar to receive Consultant Radiologist teaching further down the line to conclude the learning.

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P228 No more - In at the deep end! A structured approach to returning to training for radiology trainees

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Background: Around ten percent of trainees are out of programme at any one time for a variety of reasons. This may include time out to pursue other training opportunities, research, a career break, and most frequently parental leave. There was no structured planning process for trainees prior to their return, and anecdotally many found themselves feeling 'out of their depth' at the beginning of their return to training being expected to 'pick up where they left off', with limited re induction. This is not good practice for either the trainee or for patient safety. The London School of Radiology, with support from HEE London, has developed a formal process for taking out of programme leave, with pre-leave planning and preparation for return taking into account the individual learning needs. A period of supervision and support of returners work is explicit, mutually agreed and reviewed. This was piloted in October 2018 and March 2019. This is linked to a 2 day practical course including case reviews and simulation.

Purpose: To present a framework for supporting trainees back into training demonstrating the process/content of the paperwork and practical course and how that can be adapted to local circumstances.

Summary: We present the rationale, process, course content and preliminary feedback.

P229 Does simulation help ultrasound students to humanise personal interactions on placement?

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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. A range of simulation activities help prepare students for clinical placement. We recognise that while simulation equipment may help students gain transferable skills, we wanted to assess how much they felt simulation had helped them develop their interpersonal and communication skills.

Method: Students were asked to assess how well they felt simulation prepared them for practice in both technical and interpersonal skills using an email elicitation method. Data gathered will be analysed using a thematic analysis.

Results: Full results will be available later in the year.

Conclusion: We expect to share our experiences with other providers who may benefit from our assessments of simulation activities. Feedback from our students will help us to tailor our provision with students needs and expectations.

P230 A two-year evaluation of a direct-entry postgraduate ultrasound programme: the perspectives of clinical leads

Gareth Bolton; Lorelei Waring; Amanda Marland; Charles Sloane; Paul Miller

University of Cumbria

Background: The UK's public ultrasound departments have been understaffed for some years^[3,6]. This short-staffing is noted have a range of detrimental outcomes for patients, departmental managers and working sonographers alike^[1-3]. While ultrasound courses have traditionally recruited from a pool of general radiography graduates, a current shortage of the latter is compounding the overall problem^[6]. Consequently, new direct-entry programmes have been advocated^[5]. This poster reports findings from an evaluation of one of the UK's first postgraduate direct-entry ultrasound programmes, exploring the perspectives of the clinical leads of the departments within which participating students were placed.

Methods: A thematic analysis informed by a Straussian model of Grounded Theory was employed^[4]; semi-structured interviews with N=6 participating clinical leads were conducted at the end of the first and the second year of the programme.

Results: Five global themes emerged: (a) The anticipated extra work required to clinically mentor students with no front-line healthcare experience; (b) The 'soft skills' (chiefly communication) of students with no prior clinical background; (c) Student management of clinical objectives; (d) Rapid student adaptation to context; (e) Financial benefits of the direct-entry postgraduate model.

Conclusions: The anxieties of participants regarding (a) were rapidly quashed, while those around (b) were reported to have taken a little longer to fully address. While the equation between clinical objectives and academic work was an occasional ongoing concern, the rapidity with which the students adapted was reported to have given the participants great confidence in the selection process and the programmatic model itself.

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P231 A two-year evaluation of a direct-entry postgraduate ultrasound programme: Mapping the student experience

Lorelei Waring; Gareth Bolton; Shelley Smart; Charles Sloane; Paul Miller

University of Cumbria

Background: A progressive shortage of qualified clinicians within the UK's public ultrasound departments has been documented for some time^[2], as have the organisational, physical and psychological consequences for departmental managers and working sonographers themselves^[1,3,6]. Extant strategies to enhance recruitment from traditional graduate cohorts (typically diagnostic radiography) have, to date, barely kept pace with wastage. Consequently, new direct-entry programmes have been necessitated^[5]. This presentation reports findings from an evaluation of one of the UK's first postgraduate direct entry programmes, with a particular focus on student experience within the first cohort.

Methods: A thematic analysis informed by a Straussian model of Grounded Theory was employed^[4]; semi-structured interviews with N=5 participating students with a variety of graduate backgrounds were conducted at the end of the first and the second year of the programme.

Results: Five Global themes emerged: (a) The perceived and real benefits of prior undergraduate anatomical/biological education; (b) The perceived and real benefits of prior clinical experience in any field; (c) The demands of a placement-oriented programme and the importance of a clinical coordinator; (d) Balancing academic achievement with clinical objectives, and; (e) Concerns regarding lack of HCPC registration.

Conclusions: It was clear that many of the academic and practical worries articulated by participating students at the end of their first year had evaporated by the end of the second. Equally, adaptations were rapidly made to the demands of placement work where it was a new experience. Managing clinical objectives and lack of HCPC registration, however, remained concerns to the end.

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P232 Expanding the use of simulation and normal volunteers in ultrasound education

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The use of simulation and normal volunteers has been well utilised in ultrasound education. Simulation is well established in education and is well recognised as aiding in early ultrasound scanning skill development. The scanning of normal volunteers has been restricted to non-pregnant volunteers in accordance with BMUS guidelines on the use of volunteers for teaching purposes. There has been an increased focus on training more practitioners to undertake third trimester obstetric ultrasound scans due to increased demands on obstetric departments. This has led to the development of guidelines and governance procedures for the use of normal pregnant volunteers in consultation with the BMUS safety group.

Pregnant patient volunteers recruited from the local Obstetric ultrasound department have been utilised during the Obstetric module academic teaching on the University campus to enhance and embed practical learning within the academic practice.

Student feedback has been extremely positive on the first uses of normal pregnant volunteers on the university campus and this has led to further development of the curriculum to reflect this for future cohorts.

P233 The appropriateness and accuracy of information provided on ultrasound (US) requests in the deep venous thrombosis (DVT) service for suitable vetting and justification

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Accuracy of clinical details is essential to streamline vetting and justification of scans which allows the patient to be accurately allocated to the 'Likely' or 'Unlikely' DVT pathway. Inadequate information causes inappropriate and unnecessary scans to be performed in an already overly-burdened NHS DVT US service. The aim of this audit was to assess the accuracy and appropriateness of information provided by clinicians on DVT US requests to guide suitable vetting and justification by sonographers and/or radiologists.

Using an audit live template from the RCR, 50 ultrasound requests were retrospectively reviewed. In conclusion it was found that insufficient information was provided on request forms. This led to ambiguous justification of requests. An increased number of scans in an already burdened ultrasound service.



Recommendations for improvement included electronic requesting, a "Suspected DVT" pathway and referral form with specific questions tailored for the requester including Wells Score, treatment and D-Dimer, posters in clinical areas highlighting the NICE guidelines to requestors, education to practitioners for appropriate justification of requests and a re-audit in 12 months. Implementing recommendations will reduce the number of inappropriate requests, and allow for correct justification.

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P234 I don't understand - setting communication standards in ultrasound

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Background: Effective communication is essential in all aspects of healthcare. Ensuring that patients understand the process of their appointment, and what will occur, has a positive impact on the efficiency of the appointment; the quality of the scan; the experience of the patient and is critical to informed consent.

Purpose: This project was instigated because of an analysis of all ultrasound related complaints over a 12-month period. It was discovered that 58% of complaints were communication related. A project was begun to improve the communication skills of all clinical staff involved in the ultrasound service. This was accomplished with a series of practical workshops and reflective practice.

Content: This poster looks at the different ways that we communicate with our patients, to raise awareness and perception of communication and how to improve those skills. Also, to analyse our personal reactions and responses to patients and to reflect on how patients perceive us. The poster looks to assess how stresses occur during appointments and how complaints may occur. Finally, to consider how good communication contributes to the overall quality of the ultrasound service.

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P235 Interpretation and reporting of the initial chest x-ray (cxr) done in a&e on admission: clinician vs radiology

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Background: Chest X-rays are pivotal for diagnosing chest diseases. Correct interpretation by the medical team and their reference back to the formal Radiology reports are very important in safely providing the correct diagnosis. Objectives are to outline if there are major discrepancies between the interpretation of CXR done in A&E between the medical doctors and the formal Radiology report. Re-audit and compare the turnaround times for CXR reports and the documentation of these reports in the patient notes.

Method: This is a closed-loop prospective audit. Data collection was from the electronic reports of the CXR and the junior doctor and consultant interpretations on the admission proforma; analysis was done using SPSS 16. Standards by the Royal College of Radiologists were used to audit and re-audit against.

Results: A total of 103 samples were included. 51% of reports were issued within the same week compared to 33% from the previous audit. No significant discrepancies were noted between the medical team and the Radiology report. 9.8% of clinicians documented the Radiology report in the patient notes compared to 5.8% previously.

Conclusion: The turnaround time for reporting of CXRs continues to improve and is now within one week due to efforts to improve by increasing staff numbers in Radiology and outsourcing. No significant discrepancies were noted between the medical team and the formal Radiology report. Most of the clinicians did not document the Radiology report in the patient notes. This could lead to missing discrepancies and potentially affecting patient safety.

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P236 A pictorial visualisation of optimal imaging technique during radiographic investigation of Non Accidental Injury (NAI) skeletal surveys

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Background: The Royal Hospital for Children, Glasgow is a specialist paediatric imaging centre and performs a high percentage of the Child Protection Non Accidental Injury (NAI) imaging cases for Scotland. Rising numbers of NAI imaging examinations makes it more vital than ever that radiographers ensure optimal radiographic technique throughout these cases. The implementation of the new Royal College of Radiologists (RCR) guidelines at our hospital has seen the introduction of several new views and it was felt that this would be the optimal time to produce an informative NAI imaging poster^[1].

Purpose: We aim to provide a pictorial visualisation of positioning techniques for radiographic investigation of NAI. Included will be a number of step by step photographs demonstrating high quality positioning technique for radiographic NAI examinations. The photographs will depict anatomy immobilised in optimal radiographic imaging positions and will include all views currently recommended by the RCR. Each anatomical image will be accompanied by a corresponding radiographic image. The poster will also include a "Top Tips Section" to include topics such as immobilisation and distraction methods.

Summary: Through the use of photographs and radiographs this poster will provide an easy to understand pictorial demonstration of high quality positioning techniques.

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P237 Assessing set-up accuracy and reproducibility in rectal cancer patients - is routine CBCT verification imaging required?

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The routine clinical use of Cone Beam CT (CBCT) for on-treatment image verification is increasing. Our Department has demonstrated clear benefit for the 3D volumetric information obtained from CBCT, where the soft tissue structure clinical target volumes can be seen, as opposed to planar imaging, where the bony anatomy must be used as a surrogate for their position, in a number of pelvic cancer sites. As in other pelvic cancers, the position of the Clinical Target Volume (CTV) for rectal malignancies can be affected by rectal and bladder filling which cannot be observed with kV planar imaging.

Table 1

	AP	SI	LR
Population Σ [cm]	0.14	0.12	0.12
Population σ [cm]	0.20	0.22	0.27
Van Herk Margin [cm]	0.49	0.45	0.49

An evaluation of the use of CBCT imaging was performed for 15 rectal cancer patients. Patients received CBCT imaging on fractions 1-3 and weekly thereafter. An auto-bone match was performed followed by a manual check ensuring the CTV was within the Planning Target Volume (PTV). The data collected in this study, from 94 CBCT images, was used to determine our systematic and random set-up errors^[1], assess our CTV-PTV margins (Table 1), and the need for CBCT imaging to become routine practice for these patients.

Our systematic and random errors compare well with published data^[2,3], and the resulting margins using the van Herk recipe^[4] were within the Departmental protocol of 1.0cm. Two patients had bowel preparation issues identified on their CBCT images but the CTV was covered by the PTV following a bony match in all

cases. Therefore the routine use of CBCT for this site is under discussion.

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