

In contrast 30 reports (7%) produced via TD contained errors, all of which were minor errors. In summary VR transcribed reports have a significantly higher error rate than TD transcribed reports with more major errors which can impact patient management.

P-181 Managing PACS errors in radiology: Utilising a quality management system (QPulse)

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Aims: To review non-conformance errors in a PACS system.

To share experience of using a quality management system for non-conformances.

To review errors from a single NHS Trust.

Content: In 2014 the non-conformance module of the Q-Pulse system was set up to manage PACS errors. This allowed the team to design an electronic form which once completed alerted staff that there was a pending request. PACS administrators now receive an email alert of errors requiring action. Data analysed over twelve months showed that 0.12% of images required PACS changes, these are auditable and can be analysed by reason as well as owner, modality, hospital site and days to closure. Once the error has been corrected the system also alerts the individual who identified the error and requests a check and approval of the change, thereby closing the loop.

Relevance: In the filmless radiology environment errors occur during patient or examination identification and result in a non-conformance. These errors require communication with the radiology IT systems team and manual intervention to correct, usually through a paper-based system. Previous studies of PACS errors have identified the prevalence to range from 0.2 to 0.5% of images acquired.

Outcomes: Quick and efficient management of such changes has enabled errors to be communicated and rectified with secure data transfer. The continuous audit process has also highlighted staff training issues and improved communication between systems and clinical teams. The innovation in radiology PACS processes has led to improved governance thereby increasing quality of care and reduced risk.

P-182 Evaluating the need for intra fraction motion monitoring scans for tomotherapy delivered SABR

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In August 2015 we began to deliver SABR under the Commissioning through Evaluation(CtE) programme. Prior to this the department delivered SABR to NSCLC with step and shoot or VMAT IMRT on conventional linacs. Pre-correction, post correction and post treatment CBCT's were acquired with the option of a mid CBCT for step and shoot IMRT. Average intra-fraction motion was 0.008mm(x) (+/-0.06), 0.004mm(y) (+/-0.1) and 0.028mm(z) (+/-0.09). It was concluded the post treatment scan could be safely omitted and that a mid treatment CBCT was not necessary thus reducing the amount of time the patient remained in the treatment position for.

A VMAT solution for all SABR CtE indications (spine, pelvic/spine re-irradiation and lymph nodes) was not possible, however acceptable Tomotherapy plans could be produced. In order to ascertain intrafraction motion, evaluate verification requirements vs increasing the risk of intrafraction motion, guide immobilisation design and investigate the option of reducing PTV margins, a pre-, mid- and post-treatment imaging schedule was implemented.

Verification data were analysed for each immobilisation technique used and were correlated with beam on time and scan time demonstrating:

Intra-fraction motion is within acceptable limits in the of context of the PTV margins applied.

Recommendations can be made to remove mid treatment and post treatment scans reducing the overall treatment time and possibility for motion to occur dependant on beam on time and immobilisation technique used.

Health informatics

P-183 Accuracy of radiology requests and reports – are patients at risk?

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Aims/objectives: To determine the accuracy of voice recognition software-generated reports compared to the accuracy of electronic imaging requests. We used the RCR AuditLive template (less than 5% errors overall, 0% major errors) to compare our outcomes.

Content: Inpatient CT scans were selected randomly from a four-week period; the electronic imaging request and issued report were analysed separately. We classified errors as: minor (spelling mistakes/small substitutions eg. 'am' v 'an'), moderate (incorrect words/syntax) or major (elements causing misinterpretation eg. missing 'No').

Relevance: Good communication leads to good patient care. Errors could be avoided by a simple spell checking tool or a prompt to review the report/request prior to completion.

Outcomes: 221 scans were included, 88(39.8%) requests and 109(49.3%) reports contained no mistakes. Requests contained 65(29.4%) minor and 35(15.8%) moderate mistakes, compared to 36(16.2%) and 41(18.5%) in the reports. Requests and reports each contained 4(1.8%) major errors. The major errors in the requests were all due to missing significant clinical information. For the reports errors included: Incorrect side (promptly corrected), a missing negative, a missing word ('suggestive of -') and other ('no large or drain is present').

Discussion: The error rate observed was higher than the RCR standard, but the impact on patient safety of these errors (the majority of which were minor) is unclear; most moderate errors did not alter the sentiment of the report. The higher rate of error within the electronic imaging requests must be addressed as it directly impacts the accuracy of reports.

P-184 Examining the end-user experience of the National Integrated Medical Imaging System (NIMIS)

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Purpose: The National Integrated Medical Imaging System (NIMIS) is a secure, centralised system for storing and retrieving medical imaging which is currently being rolled out across a number of clinical sites. The purpose of this audit was to obtain feedback from the end-users of NIMIS in order to understand the perceived advantages and disadvantages of NIMIS and its existing interface. A secondary aim was to gather suggestions about potential improvements directly from its end-users.

Materials/methods: A survey was created using an online service provider. It was sent to consultants and non-consultant hospital doctors (NCHDs) at 34 NIMIS sites. The 260 completed responses were analysed in relation to key areas of NIMIS functionality, performance and end-user satisfaction.

Results: The results indicated that while users are generally satisfied with NIMIS, areas exist where its design and functionality could be improved. These areas included difficulty in identifying the appropriate code for a study (34%); dissatisfaction with ordering and viewing scans (32%); and a need for improved communication between end-users and local Radiology departments, with 104 (40%) unsure when to contact the department and 137 (53%) dissatisfied with the feedback they received.

Conclusion: Although generally satisfied, this survey has highlighted issues that need to be addressed in order to improve functionality while promoting patient safety. These improvements relate to IT infrastructure; increased clarity regarding patient records; simplified image ordering; and, the continued improvement of communication between end-users and local Radiology departments.

Emerging technologies

P-185 The use of needle guidance software within interventional radiology

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Cone Beam CT (CBCT) has allowed for the expansion of the examinations/procedures that can be performed within the interventional radiology suite. Many of these procedures were once only possible within CT, however with the availability of CBCT and needle guidance software within the interventional suite these exams can be brought into the Interventional setting. This has allowed for the improved safety and care of the patients whilst not limiting the