Radiotherapy Newsletter of the HPA

Safer Radiotherapy

March 2013 Issue 8

Welcome to the eighth issue of *Safer Radiotherapy*. The aim of the newsletter is to provide a regular update on the analysis by the Health Protection Agency (HPA) of radiotherapy error (RTE) reports. These reports are voluntarily submitted to the National Reporting and Learning System (NRLS) of the NHS Commissioning Board to promote learning and improve patient safety.

The newsletter is designed to disseminate learning from RTEs to professionals in the radiotherapy (RT) community to influence local practice and improve patient safety.

Regular features include:

- RTE Data Analysis – undertaken by the HPA, highlighting key messages and trends identified from a three-month period of RTE reports
- Error of the Month – provides advice on preventing recurring errors in the patient pathway
- Guest Editorials – are invited from those wishing to contribute to issues surrounding patient safety issues in radiotherapy
- Patient Safety in Radiotherapy Steering Group – updates on the work of this multidisciplinary group (IPEM, RCR, SCoR, HPA and service users).

Any comments and suggestions for inclusion in the newsletter would be gratefully received. They should be sent to radiotherapy@phe.gov.uk

Thanks to all contributors to this issue. The next issue of *Safer RT* will be published in July 2013 and will be available at www.hpa.org.uk/radiotherapy

Helen Best
Editor

PSRT – Patient Safety in Radiotherapy Steering Group

From 1 April 2013 the HPA will become part of Public Health England (PHE), which will be established as an executive agency of the Department of Health, to protect and improve the nation's health and well-being, and to reduce health inequalities.

The HPA radiotherapy functions will continue in Public Health England.

Continuation of business is highlighted with a new data sharing agreement, between PHE and the NRLS. The NRLS will continue to collate RTE data from England and Wales for HPA/PHE analysis.

Work also progresses with colleagues in Northern Ireland and Scotland for submission of reports for inclusion in national analysis. To this end, colleagues in Scotland have successively submitted sample data to test the reporting mechanism, moving one step closer to a united reporting culture.

Learning from RTEs is a highly effective tool for improving patient safety in RT. Please continue to report RTEs to inform ongoing safe and effective radiotherapy practice.

INSIDE THIS ISSUE

Please note our new email address from 1 April 2013:

radiotherapy@phe.gov.uk

Previous radiotherapy publications from the HPA will remain available at www.hpa.org.uk/radiotherapy

The Radiotherapy Team is based at CRCE Chilton

EDITORIAL HEADLINE

UK participates in ACCIRAD

ACCIRAD is an EU-funded project, the objectives of which are a study on the implementation of the Council Directive 97/43/Euratom (Medical Exposure Directive, MED) requirements aimed at the reduction of the probability and the magnitude of accidents in radiotherapy and development of guidelines on a risk analysis of accidental and unintended exposures in external beam radiotherapy.

UK representatives have been invited to complete a series of detailed questionnaires on current practice on approaches to risk assessment and RTE and near-miss reporting. The results of these questionnaires will inform a workshop in Poland in June 2013, in which HPA/PHE staff will be participating. The primary aim of the workshop is to develop guidelines to encourage all countries to promote the implementation of the requirements of Article 11 of MED.

Further details are available at **http://www.accirad.eu/**

RTE Data Analysis: August–December 2012

National reporting: we're getting there!

HPA/PHE continues to support radiotherapy departments in contributing to the national initiative for voluntary reporting of RTEs. The number of departments participating continues to increase. This was at 74% at the last analysis and has reached 79% in this reporting period.

This mature reporting culture is also reflected in the increase in the average number of reports submitted each month, which has grown by 58% in this reporting period. It should be noted the vast majority of these reports are lower level incidents having little or no significant effect on the planning or delivery of individual patient treatments.

Consistency checking of the application of classification and coding achieved almost 95% agreement in this reporting period. Further guidance is available in the *Good Practice in Radiotherapy Error Reporting Series* (**www.hpa.org.uk/radiotherapy**).

Top tips for reporting

1 Apply the trigger code, classification and coding locally

To ensure the report can be extracted from the NRLS for inclusion in the national analysis, include the trigger code ***TSRT9*** in the first open text field of the RTE report

To ensure that both local and national analysis can be completed, the classification and coding from TSRT should be applied locally to all RTE reports

The format should be as follows: ***Trigger code / Classification / Coding***

For example: ***TSRT9 / Level 5 / 4j***

This would show a non-conformance in relation to the consent process

2 Include one event per report

For each event submit one RTE report

If a single event affects more than one patient submit one RTE per patient involved

If multiple unrelated RTEs occur during a single patient's planning and/or treatment submit one report per RTE

3 Ensure a brief description of the event is included

Having a brief description of the event allows consistency checking and facilitates future learning at both local and national levels

4 Consistency check the process code

The most commonly amended codes were associated with on-set imaging processes. Further guidance on the application of the associated process coding is available in *Safer RT* Issue 7

Other codes amended included the omission of bolus and weekly checks

To improve consistency across reporting departments, the following application of process coding is suggested:

Omission of bolus to be coded as ***13u (Use of compensators)***

Omission of weekly chart checks to be coded as ***14c (On-treatment review of notes/data according to protocol)***

5 Consistency check the level of classification

Use the decision grid to classify the severity of the error as set out in national guidance (**www.rcr.ac.uk**)

The most commonly amended classification was associated with verification images being taken with the omission of moves from reference marks

To improve consistency across reporting departments the following application of classification level is suggested:

On-set imaging completed with the omission of, or incorrect, 'Movement from reference marks', error corrected prior to treatment to be coded as ***Level 3*** events as the associated imaging dose was not given as prescribed

Quarterly Analysis

Submissions from 42 RT departments contributed to this issue's full data analysis, for 1 August 2012 to 31 December 2012, which is available at **www.hpa.org.uk/radiotherapy**

The analysis includes data on primary process coding and severity classification of the RTE. A breakdown of primary process codes by classification levels is also included.

Classification of RTEs

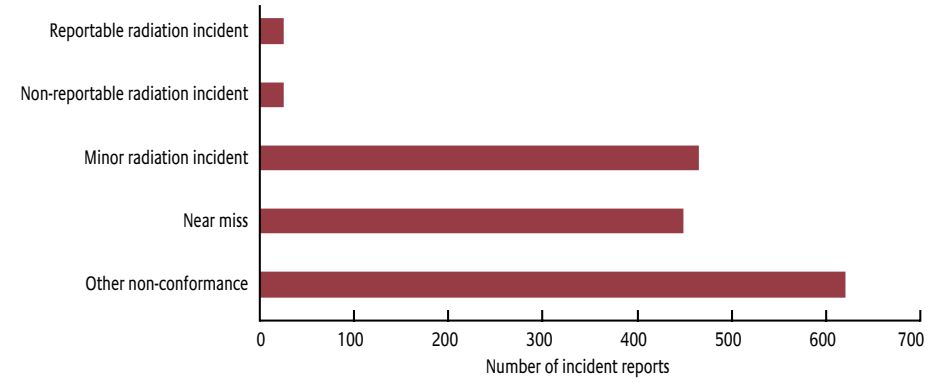
Of those RTEs reported to the NRLS for the period August–December 2012, 1534 out of 1586 reports (96.7%) were classified as minor radiation incidents, near misses or other non-conformances (see Figure 1). This is consistent with previous analyses. These incidents would have no significant effect on the planning or delivery of individual patient treatments.

Reportable radiation incidents (Level 1) made up 26 of all reports (1.6%). 'Movements from reference marks' and 'ID of reference marks' comprised 8 (30.7%) of all Level 1 RTEs reported to the NRLS for this period. When compared with the analysis in *Safer RT* Issue 7, this marks a reduction from 41.6% to 30.7% in Level 1 RTEs.

Non-reportable radiation incident reports (Level 2) made up 26 of all reports (1.6%). For further advice on minimising 'Moves from reference marks' see *Safer RT* Issue 1, Error of the Month. The majority of Level 1 and 2 RTE reports related to treatment unit processes, equating to 17 (65.4%) and 18 (69.2%), respectively.

Of the 465 minor radiation incidents (Level 3) reported, 60 (12.9%) were related to the 'On-set imaging production process', making it the most frequently occurring code in this classification. On-treatment imaging was discussed further in Issue 7. The second most frequently

Figure 1 ***Classification breakdown of RTE reports extracted from the NRLS using the TSRT9 trigger code, August–December 2012 (1586 reports)***



occurring incident at 52 reports (11.2%) was 'Movements from reference marks', consistent with Level 1 and 2 findings.

The most commonly occurring RTE process code in the near-miss (Level 4) classification was 'Accuracy of data entry' with 49 reports (10.9%). 'Documentation of instruction/information' was attributed to 28 reports (6.2%).

Within the non-conformance (Level 5) classification 'Management of process flow within planning' had 40 reports (6.4%) and 'Documentation of instruction/information' had 32 reports (5.2 %). These were the most frequently occurring RTEs in this classification.

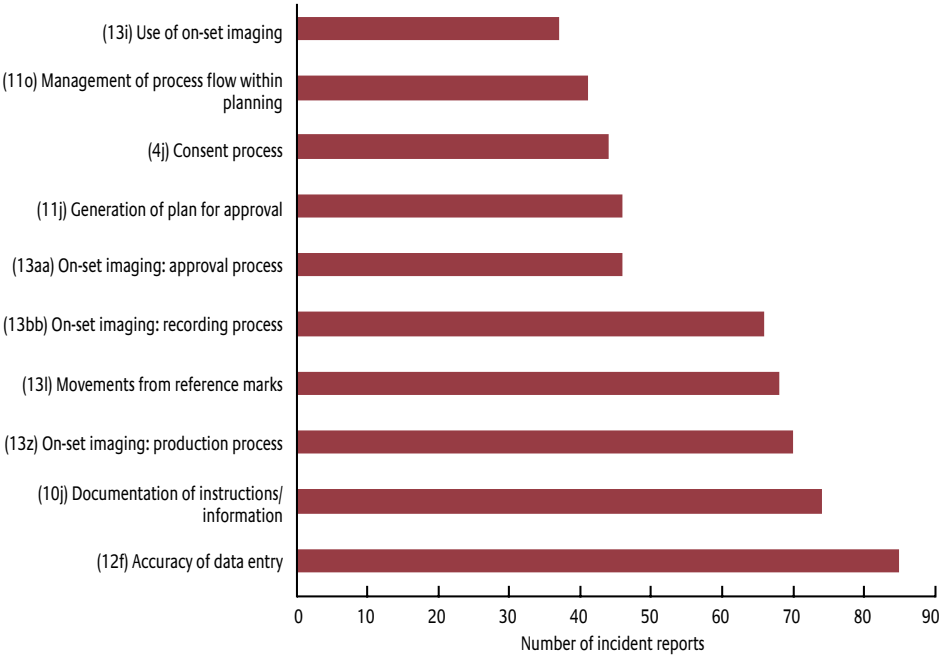
Guidance on the latter RTE can be found in this issue's Error of the Month.

Primary Process Code

The main themes (points in the patient pathway where the majority of reported RTEs occurred) for this dataset are shown in Figure 2. The distribution is similar to that shown in the last issue of *Safer RT*. Of note, 'Documentation of instructions/ information' contributed to 74 (12.8%) of the reports in the main themes.

If your department has examples of good practice relating to RTE prevention please email the Radiotherapy Team at radiotherapy@phe.gov.uk

Figure 2 ***RTE Main Themes (577 out of 1586 reports), for August–December 2012 (with process code indicated)***



The data analysed is submitted by the RT community, therefore your comments and suggestions regarding the RTE analysis are welcomed. For further information or enquiries please contact the Radiotherapy Team at radiotherapy@phe.gov.uk

ERROR OF THE MONTH

Documentation of Instructions

TSRT Process Code: Documentation of instructions/ information (10j)

Documentation of instruction/ information during pretreatment activities made up 74 RTEs (4.7%) reported from August to December 2012. This was the second most commonly occurring RTE. It is of note that it was the third most commonly occurring RTE in *Safer RT* Issue 7, at 5.1%.

Documentation of instruction/ information RTEs are associated with the completion of patient-specific set-up details at the time of localisation. The main themes highlighted within these reports include unclear, incorrect or missing patient-specific documentation and instructions.

How can we minimise the risk of this RTE occurring?

Points to consider

1. Ensure the primary source data is available and used where possible. Avoid duplication and transcription of the data
2. Use standard site-specific set-up templates to help minimise the omission of data and inaccuracies in data collection
3. Ensure safety-critical items are included in patient-specific set-up templates, such as laterality. This information should also be documented in clinical procedures and protocols
4. Reduce transcription errors by utilising oncology management system where possible
5. Ensure documentation is clear, with consistent use of language and abbreviations, to streamline communication across the department
6. Consider the use of skin-rendered images or photographs for reference marks and complex set-ups
7. Ensure independent checking of the data is included in routine checks and accountability is documented
8. Audit staff compliance with written procedures and protocols.

Medical Exposure Department
HPA Centre for Radiation, Chemical and Environmental Hazards
Chilton, Didcot, Oxon OX11 0RQ, UK
Tel: +44(0)1235 831600
Email: radiotherapy@hpa.org.uk and radiotherapy@phe.gov.uk
www.hpa.org.uk/radiotherapy
Twitter: @HPAuk

GUEST EDITORIAL

Stress in the Workplace

Maria Murray MPhil CRadP MSRP fHEA DCR(T)
Professional Officer (Radiation Protection)
The Society & College of Radiographers (SCoR)

Delivery of a safe and effective radiotherapy service requires a professional, competent, committed and highly specialised workforce. It is imperative that this workforce continues to learn from the radiotherapy errors (RTEs) and near misses reported locally, nationally and internationally. Radiotherapy staff work in challenging environments, where cognitive, emotional and physical exertions are demanded of them – there is growing evidence that this workforce is under some level of work-related stress.

Recent surveys[1,2] have highlighted the pressures on staff from increasing workloads, and the need to work additional hours and work whilst feeling unwell. The results raise concerns for the wellbeing of staff which may pose a detrimental effect on all the good work that the community has, to date, achieved in the reduction of RTEs. Reports of increasing vacancy rates amongst posts for radiographers (7.6%) and physics (7.0%) staff[3] are bound to have a detrimental impact on the service being able to maintain 'world class' status.

The SCoR survey of musculoskeletal and other health disorders amongst therapeutic radiographers[1] highlighted the strains that therapeutic radiographers feel in their working lives, where 61.2% of the respondents reported difficulty in keeping up with workload pressures, 80.2% felt the effects on their work performance and 24.7% generally felt 'stretched'. The NCAT report[2] also conveys some serious findings, with 37.5% of radiotherapy staff (physics and radiography) experiencing 'emotional exhaustion' and 48.5% feeling fatigued, even before starting work.

SCoR receives weekly enquiries regarding stress amongst radiographers[4] and a survey of health and safety representatives in 2012 (some of whom were from radiotherapy departments) reported that 70.8% were aware of staff being absent from work due to stress. Although 91.2% of departments have a 'stress policy' in place, 35.1% failed to carry out a risk assessment in respect of stress; from those that did assess the risks, 88.5% identified workload demands with inadequate time slots for patients as typical hazards. A SCoR 'stress' conference later this year is intended to offer solutions and encourage all to work together on this issue.

Those who suffer from stress and fatigue generally function less efficiently. It is time to seriously consider the issues to see if there are better ways of working, perhaps improving use of technology and reviewing processes.

The extent of the problem must be addressed and strategies to reduce the negative influences affecting staff within the workplace need to be considered.

If we do not, the consequences may be an increased probability for RTEs and/or we may continue to lose good and committed staff from within our community.

References

1 SCoR (2011). Musculoskeletal Disorders in Therapeutic Radiographers.
2 NCAT (2013). National Survey of the Radiotherapy Workforce. Presented to NRIG Workforce Sub-Group, 1 March 2013.
3 SCoR and IPEM (2011). Report on the Census of the Radiotherapy Workforce in the UK.
4 SCoR (2013). Stress Policies within SoR Members Departments.

DATES FOR THE DIARY

16 April	IPEM, Data: Storage, Management, Generation and Legislation, London
19–23 April	ESTRO, Geneva
4–6 June	ACCIRAD European Workshop, Poznan
8 July	BIR IR(ME)R Update, Birmingham
July	*Safer Radiotherapy*, Issue 9