



Safer Radiotherapy

October 2013 Issue 10

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

Safer RT 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 PHE, 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, PHE 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 January 2014 and will be available at www.hpa.org.uk/radiotherapy. The HPA website will continue until further notice – look out for updates in future issues.

Helen Best
Editor

Patient Safety in Radiotherapy Steering Group (PSRT)

Work is ongoing to obtain data from radiotherapy departments in Northern Ireland and Scotland for inclusion in the RTE analysis.

PHE continues to support departments in contributing to the national initiative for voluntary reporting of RTEs. The number of departments reporting from England and Wales has now reached 48. We would like to thank all the departments that have been in touch with the PHE Radiotherapy Team for support.

This means that there remain five departments that currently are either not reporting or not using the TRST trigger coding to report RTEs through the NRLS.

Reporting of RTEs is a requirement of the English NHS Commissioning Board and a peer-review measure. If any departments require support please contact PHE staff at radiotherapy@phe.gov.uk.

This comprehensive reporting facilitates UK-wide learning from RTEs, which is a highly effective tool for improving patient safety.

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Jo Clorley and Andrew Morgan

The Radiotherapy Team is based at CRCE Chilton



EDITORIAL HEADLINE

Well Done – We Are Almost There!

Safer Radiotherapy Issue 1 was published in 2010 with the purpose to disseminate learning from RTEs.

Since then the number of errors reported in each issue has steadily increased, from 294 to 1565 in the current (tenth) issue. (It should be noted that 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.) Along with a rise in the number of reports, there has been an increase in the use of TSRT trigger coding, from 20 departments to 42 in this issue.

Engagement within the radiotherapy community has continued to be essential in the development of the RTE analysis.

RTE Data Analysis: May–August 2013

Quarterly Analysis

Submissions from 42 RT departments contributed to this issue's full data analysis, for 1 May 2013 to 31 August 2013, which is available at www.hpa.org.uk/radiotherapy.

The analysis includes data on primary process coding and severity classification of the RTEs. 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 May–August 2013, 1516 out of 1565 reports (96.9%) 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 had no significant effect on the planning or delivery of individual patient treatments.

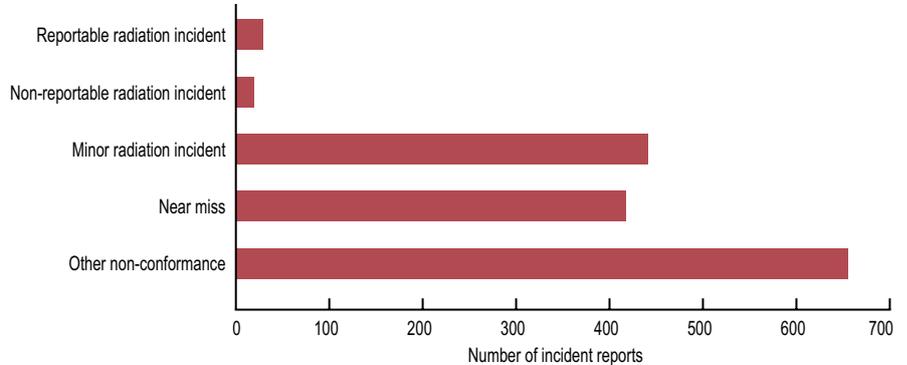
Reportable radiation incidents (Level 1) made up 29 of all reports (or 1.9%). 'Movements from reference marks' comprised 3 (33.3%) of all Level 1 RTEs reported to the NRLS for this time period.

Non-reportable radiation incident reports (Level 2) made up 20 of all reports (1.3%). The majority of Level 1 and 2 RTE reports related to treatment unit processes, equating to 9 (31.0%) and 11 (55.0%), respectively.

Of the 442 minor radiation incidents (Level 3) reported, 72 (16.3%) were related to the 'On-set imaging production process', making it the most frequently occurring code in this classification. The second most frequently occurring incident, at 48 reports (10.8%) was 'On-set imaging: approval process'. On-treatment imaging was discussed further in Issue 7 of *Safer RT*.

The most commonly occurring RTE process code in the near-miss (Level 4)

Figure 1 Classification breakdown of RTE reports extracted from the NRLS using the TSRT9 trigger code, May–August 2013 (1565 reports)



classification was 'On-set imaging: approval process', with 26 reports (6.2%). On-set imaging contributed to the top three most frequently occurring process codes in this level, consistent with Level 3 findings.

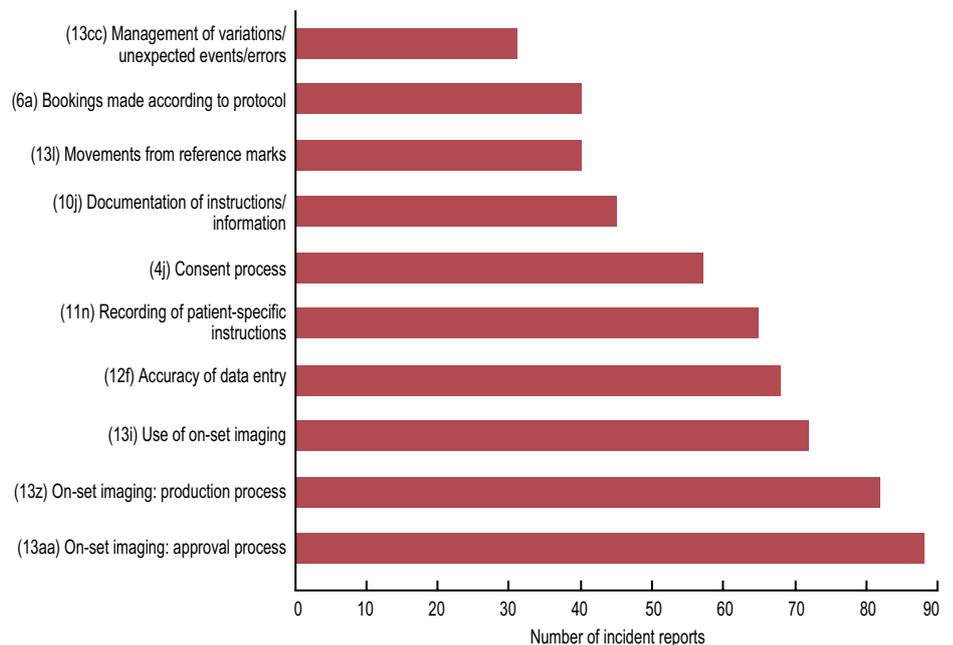
Within the non-conformance (Level 5) classification 'Recording of patient-specific instructions' had 27 reports (4.1%) and 'End of process checks' had 19 reports (2.9%). These were the most frequently occurring RTEs in this classification.

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. Of note, 'Recording of patient-specific instructions' contributed to 65 of the reports in the main themes (11.0%). This is discussed further in the *Error of the Month*.

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 (588 out of 1565 reports), for May–August 2013 (with process code indicated)



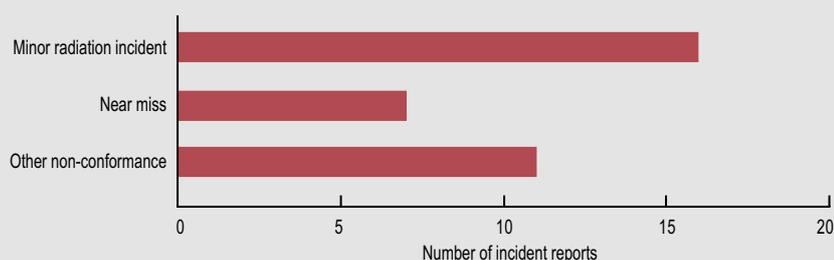
The data analysed is submitted by the RT community, therefore your comments and suggestions regarding the RTE analysis are welcomed. For further information or enquiries please contact the Radiotherapy Team at radiotherapy@phe.gov.uk.

IMRT-associated RTE Reports

In August 2012, 13.6% of radiotherapy patients in England received intensity-modulated radiotherapy (IMRT). By April 2013 this had risen to 22.3%*. As clinical departments adopt this highly complex and potentially labour intensive technique the proportion of IMRT-associated RTE reports will continue to increase.

Figure 1 illustrates the number of reports associated with IMRT for this reporting period. Of note, these reports are lower level incidents.

Figure 1 Classification breakdown of IMRT RTE reports, May–August 2013 (there were no reportable or non-reportable radiation incidents in the period)

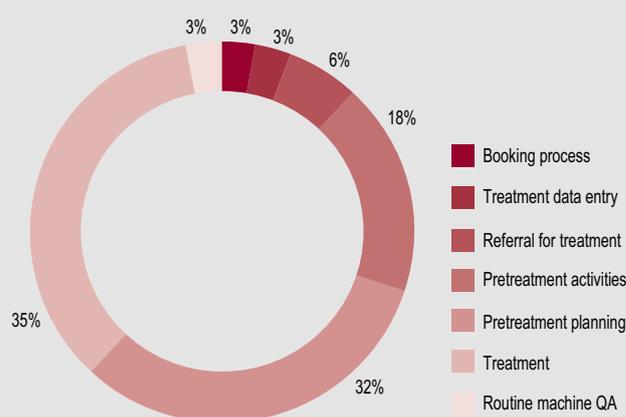


These incidents occur most frequently within the treatment unit process, followed very closely by the pretreatment planning process.

Recent examples of IMRT-associated reports include 'Incorrect documentation and positioning details', 'Confusion over which imaging technique to use or incorrect imaging taken' and 'First time technique is delivered'.

Following the advice given in the *Error of the Month* from previous issues of *Safer RT* may aid in reducing some of these errors.

Figure 2 Breakdown of IMRT RTE main activity codes, May–August 2013



* Cancer Research UK, The Radiotherapy Innovation fund, Evaluation Report, July 2013

ERROR OF THE MONTH

Recording of patient-specific instructions

TSRT Process Code:
Recording of patient-specific instructions (11n)

This code accounted for 65 (4.2%) RTEs reported from May to August 2013. This was one of the top ten most commonly occurring RTEs. Of note, this has been in the top ten in five previous issues of *Safer RT*.

This RTE concerns the recording of patient-specific instructions in the pretreatment planning process. 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 Use primary source data
- 2 Review working practice for redundant processes, unnecessary transcription and repetition of data to improve process efficiency
- 3 Indicate competence to undertake tasks in training records and provide records
- 4 Create an appropriate environment with minimal distractions for staff
- 5 Ensure independent checks and verifications are performed by adequately trained and entitled operators
- 6 Pay special attention when implementing new techniques
- 7 Investigate the use of the OMS for templates and 'paper-lite' working, eg QCL and Taskpad
- 8 Audit to inform regular review and updating of procedures

DATES FOR THE DIARY

21–23 October 2013	UKRO, Nottingham
12 December 2013	Stereotactic Ablative Body RT: Current Status and Development, Study Day, BIR London
January/February 2014	SCoR Annual Radiotherapy Conference, Bristol
January 2014	<i>Safer Radiotherapy</i> , Issue 11

GUEST EDITORIAL

Collating, Analysing and Sharing RTE Learning: Departmental Experience

Jo Clorley and Andrew Morgan

Beacon Centre, Musgrove Park Hospital, Taunton



Publication of *Towards Safer Radiotherapy* (TSRT, available at www.rcr.ac.uk) in 2008 coincided with commissioning of the radiotherapy service in the Beacon Centre at Musgrove Park Hospital, Taunton. A radiotherapy management decision was made that when the clinical service went live in spring 2009, the TSRT scoring system would be implemented from the start.

At that time a lengthy paper form was the reporting mechanism for the radiotherapy department. The expectation was that, ideally, all degrees of TSRT non-compliance would be reported and assessed. In reality, however, healthcare workers often work under pressure, so it is unrealistic to expect them to complete a lengthy incident form and assign the correct pathway code for, say, a minor non-conformance. In practice, this would lead to under-reporting of near misses. Consequently, a department may become proficient in reporting serious incidents, but not the myriad of process failures that do not in themselves lead to patient harm but that may provide early warning of potentially more serious system failures.

The trust-wide system had other shortcomings, including potential transcription issues and the lack of inclusion of the TSRT pathway code.

CHKS		UKAS		Haematology, Oncology and Palliative Care Directorate		NHS Musgrove Park Hospital	
Incident Ref No.-	888820082	Incident Category	RT4				
TSR Codes	10f	TSR Reference=	TSRT9;4;10f				
Name of person Reporting Incident		Time (HH:MM)	09:39				
Job Title of Person reporting incident	Dosimetrist	Date (DD/MM/YYYY)	15/07/2013				
Patient Name		Musgrove Park Hospital Number					
TSRT9;4;10f Patient in Head and neck shell was not scanned to include top of head, meaning that a direct superior beam could not be used (could not be accurately modelled). A direct sup beam would have been recommended in the Inverse Planned IMRT technique being used for this treatment, though the technique was adapted to avoid the missing anatomical information. Agreed							
Indicate whether the incident was Near Miss (No actual harm to person etc.) OR an adverse effect (See Consequence Score)		1		Near Miss (Consequence=0): Consider if near miss requires investigating - How serious could it have been? Level 4/5 incidents have score 0 Green (1-2): Has this green incident happened before - is it part of a trend? Orange (3-4) Report to Risk Management Dept. on Ext 2489 within 1 working day of incident Red (5): Contact Exec Director immediately via Manager or Clinical Site Manager out of hours			
Patient Contact Details				Department incident Occurred			
				Location incident identified, if different			
Details of any other persons/organisations Involved (Name, ID, Contact, involvement)				Name and contact details of any witnesses			
Consultant (IRMER Practitioner)				Unit			
Treatment Area				Date Incident Occurred			
Technique				Time Incident Occurred			
				Date Incident Discovered			
Details of Incident Discovery:							

To overcome these issues, an electronic incident reporting form was developed locally, in collaboration with the trust's governance support unit. The form is tailored to the severity of the incident. Near misses and non-conformances require the most basic information to be entered, whereas serious (reportable) radiation incidents require extensive documentation. An operator reporting an incident is required to select answers from drop-down menus on an Excel™ spreadsheet which then automatically generates the correct TSRT code.

This system was adopted on 1 June 2011. Since then, there has been a marked increase in the number of near

misses being reported. The system has already effected a change in practice with regards to the layout of the machine logbooks. Members of the department are much happier with the new system, mainly due to its simplicity and time saving. Although not shown in the example above, the form also provides consequence scoring for the trust's own governance structure – which, confusingly, is inverted with respect to TSRT, 5 being serious and 1 being minor.

The reports then go to clinical governance where they are put into the Ulysses incident reporting system. Work is currently in progress to establish similar reporting processes for the medical oncology service.