Radiation Oncology Safety Information System
http://www.rosis.info

Feedback letter August 2006
SPOTLIGHT ON PATIENT IDENTIFICATION

- *This Newsletter* – Spotlight on Patient Identification
- *This Newsletter* – Comment re. Spotlight on In-vivo Dosimetry (see end of newsletter)
- *Reminder:* The second ROSIS short course **"Working towards safer healthcare delivery: minimising the impact of incidents in radiotherapy"** was a great success. This course will be run again in May 2007. Further details will be available at http://www.rosis.info.
- *Reminder:* The website – we haven't forgotten! – we have finally received the new website, and it will soon be online . . .

Dear ROSIS Contact,

The ROSIS group would like to draw your attention to some interesting incident reports in the database. **The theme of this month is Patient Identification.**
This topic and related reports are described below, together with some reflections. If you would like to read the full reports or make a comment, click on the links provided.

Remember that you can search the full ROSIS database at http://www.rosis.info

Keep the database alive and report your incidents! Reporting is confidential in relation to clinic. If you have forgotten your password, please contact ola@eircom.net

Best regards from the ROSIS group:
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If you do not wish to receive further emails from ROSIS, please state so in a reply to this message, and you will be removed from this mailing list.
If you have not received this message directly from ROSIS but would like to be added to our mailing list, please contact us at snichuin@tcd.ie .

PATIENT IDENTIFICATION

Misidentification is a problem that crosses all areas of community and hospital based healthcare practice and therefore also within our radiotherapy departments. "The potential for misidentification errors is greatest in acute care hospitals where a wide range of patient interventions are carried out in various locations on patients by staff who work in shifts". (Policy Directive, Department of Health, New South Wales, Australia).

An indication of the importance given to this problem can be seen in the fact that the first of the Joint Commission on Accreditation of Healthcare Organisations in the USA (JCAHO) National Patient Safety Goals for 2003 is to 'improve the accuracy of patient identification".

Radiotherapy involves correctly identifying the patient for each fraction to be delivered; this may be complicated by the fact that many patients attend as outpatients and do not have the same identification procedures as inpatients.

Accurate identification relies on obtaining separate items of personal information for each patient treated. Identity wristbands have been introduced in hospitals for many procedures but are prone to problems and published data details numerous errors recorded where wristbands are involved. Other high tech preventative measures include barcoding, radiofrequency identification, fingerprinting etc and are being introduced or considered for use in hospital settings.

There is some international variation on the number of items necessary to ensure correct identification. The UK and the New York State Department of Health recommend three independent items whereas the JCAHO in the USA recommends only two.

The items most commonly used are patient first and last name, date of birth and address. The hospital number should not be used. In verifying the information it should be carried out discretely and the patient should be asked to state his/her details that are then confirmed by the staff member who will check either the wristband, patient identify card, treatment chart etc. As can be clearly seen from cases in the ROSIS database detailed below patient details can be very similar and a fourth safety feature could be the inclusion of a patient photograph in the notes and record and verify system.

Chassin et al describe a case of misidentification and an analysis of the contributing factors. In addition to standardized protocols on verification of identification they recommend a comprehensive patient information system covering the full activities of the hospital and a medical record that contains legible, clear information about the reason for hospitalization and the planning investigations and treatments, and familiarization with your patients. (Mark R. Chassin et al, The Wrong Patient. Annals of Internal Medicine June 2002). This is very readily applicable in our radiotherapy departments.

The ROSIS data

Chassin et al believe that open and vigorous discussion is a prerequisite for robust solutions. This type of discussion can be facilitated by a system such as ROSIS allowing for sharing of information and learning from experience of others. Several examples of misidentification have been reviewed as part of this discussion paper. They occurred mainly on an external beam unit with one related to a brachytherapy procedure. These errors have different root causes including poor communication and incorrect data information entry. In some instances the error was detected before treatment was delivered but in some cases the patient received incorrect treatment. However no incident resulted in injury to the patient.

> Incident ID 351: Lack of communication was cited when a student brought the wrong patient into the treatment room. This was discovered when the staff in the treatment room spoke to the patient. This incident is similar to many outlined in the literature and could have been prevented by the student following clearly defined protocols on patient identification. No details were available as to the stage in training of the student and it may also have been an inappropriate task for the student.
> http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=351
>
> Incident ID 437: An incorrect patient was also brought into the treatment room. In this instance the error was not discovered until the patient was setup and the reference marks did not fit. The cause cited was a change of bed numbers in the ward between two patients with similar first and last names. Available guidelines all clearly recommend not using hospital or bed numbers as a means of patient identification and this incident is a clear example of what can happen in those circumstances. In addition the staff on the treatment unit were clearly not

familiar with the patient and would appear not to have gone through any verification of identification process with the patient.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=437

Incident ID 479: the label in the header of the treatment chart did not correspond to the patient barcode. The barcode was correct and the cause was identified as inclusion of patient labels at different points in the patient pathway. This incident illustrates how the use of more sophisticated identification methods can reduce the potential for error and also the role of a seamless hospital wide information system as recommended by Chassin.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=479

Incident ID 473: A patient was discharged from a referring hospital where he was an inpatient. Following discharge another patient, with an identical name, was admitted to his bed. Transport to the radiotherapy was booked and the wrong patient subsequently presented for treatment. The error was noticed by the administration clerk when she checked the date of birth. Again this incident highlights the importance of identification verification procedures being in place and checked at all stages of the patient pathway. All staff should be aware of the procedures and follow the agreed protocol.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=473

For the majority of routine treatments in our department similar, evidence based protocols, are in place. This is consistent with best practice. It can however lead to the types of incidents described below where patients with the same disease are treated using the same prescription / technique adding a further layer of similarity and potential for incidents. If careful verification of identity which included checking the patient, notes, record and verificy data and checking all against the same parameters is not always adhered.

Incident ID 441: Two patients with the same pathology were to start treatment. The first patient treatment was started but when the second patient was called he said that that was not his correct name. The treatment was interrupted and the data checked. The first patient was slightly deaf and was treated in error. Setup references were ignored also in this incident.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=441

Incident ID 427: The patient name and ID included in the treatment plan did not correspond to the patient for simulation. The documentation was incorrect and related to a patient with a similar name. Lack of care and attention by the treatment planning staff was cited.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=427

Incident ID 49: Occurred during clinical review of a patient who had been simulated and marked for radiotherapy. At the marking up session that followed the CT scans presented were for a different patient who had the same name but a different date of birth. By this time both patients had had a CT scan of the brain. The incident occurred when incorrect CT scans were sent tot he simulator and the staff failed to check details other than name, again highlighting the need to check all three parameters on all information received.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=49

Incident ID 266: In this incident a patient was treated with an incorrect plan. Similarly to Incident 5 all parameters fitted with minimal differences. The cause again was failure to correctly identify the patient prior to treatment.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=266

Incident ID 312: Similar incident relating to a patient receiving treatment for breast cancer. A slightly larger volume than intended was treated. The centre suggest photographic identification in addition to verbal. This would also have been applicable in Incident 35.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=312

Incident ID 387: Again related to the treatment of a patient with another patient's prescription. In this incident there was an additional risk introduced when the patient was

moved to a second Linear Accelerator following breakdown and the staff forgot to check the correct identity.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=387

Incident ID 5: This incident related to a brachytherapy procedure. An incorrect patient database was used but with identical parameters. The incorrect patient was treated but fortunately received correct treatment. The suggestion given by the reporting centre was to include a photograph of the patient in the record and verify system. Verification of identification protocols and adherence by all staff would also have prevented this incident.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=5

The following incidents relate to patients with the same first name and surname. This type of incident can occur very readily and highlights the need for an even higher level of vigilance within the departments. It also raises the need for photographic identification to be incorporated into the data where possible as a further safety check.

Incident ID 35: This was discovered at time of treatment. A patient marked for treatment to her humerus remarked that she had never been treated previously but that her next door neighbour who had the same name and birthday but who was a year older had been treated by the same consultant 3 years previously. The booking form for the new patent had been completed correctly but an incorrect set of notes was sent to the clinic. The similarities between the 2 patients were very strong and it is possible that even with verification protocols in place and adhered to the incident could still have occurred. It perhaps highlights the importance of engaging in conversation with the patients.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=35

Incident ID 412: Two patients with the same first name and surname but with different middle initials were being treated for prostate cancer. One of the patients had already started the second phase of treatment with a reduced boost field. He was called in to the treatment room and setup using the incorrect parameters resulting in the irradiation in an unwanted region. The technologist team had just changed and were not informed of the two patients with the same name.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=412

Incident ID 568: A patient was simulated and the field areas marked onto the Beam Direction Shell. When the patient was treated the BDS from another patient who had the same name and treatment area was incorrectly used. In addition the BDS fitted well. This again highlighted poor patient and equipment identification.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=568

Incident ID 408: Again involved two patients with the same first and surname but a different middle initial. In this instance in the image acquisition sheet the setup parameters were different from the skin marks on the patient. The physician was called and recognized that the incorrect patient had been setup. This also shows the importance of continuity and knowing the patients in your care.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=408

Incident ID 578: A BDS for one patient was fitted to another patient with the same name at simulation. The patient was then simulated and the marks put on to an incorrect BDS. The BDS did not fit well but this was not noticed until the treatment stage when the treating radiographers realized that the area to be treated did not match the marks on the shell. A BDS that doesn't fit correctly should always be investigated further.
http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=578

The incidents described above are similar in cause to the numerous misidentification errors reported in other hospital settings and could all have been prevented by the

introduction and adherence to a robust patient identification verification system and by staff being constantly alert to the possibility of patient misidentification.

The IAEA, in the Basic Safety Standards (for Protection against Ionizing Radiation and for the Safety of Radiation Sources), considers that therapeutic treatment delivered to the wrong patient shall be promptly investigated (by registrants and licensees) and corrective measures shall be indicated and implemented to prevent recurrence following this investigation.

Please give **your comments** on these reports [snichuin@tcd.ie]. We will add selected comments to next month's feedback letter.

Comments on In-VIVO Dosimetry (ROSIS Newsletter, March 2006):

QUESTION on Incident ID 385 http://www.clin.radfys.lu.se/queries/q_search_ID.asp?number=385:
If the original calculation was wrong and it wasn't picked up at checking, how did the in-vivo dosimetry system know what the correct dose was?

ROSIS ANSWER:
This ROSIS answer is a potential scenario, and not based on any further investigation of the facts.

Two separate calculations were done here

1. MU calculation
2. Expected diode reading

It is possible that the physicist correctly calculated the dose in Gy per field (using the correct patient dimensions and depth doses), but when transferring this to MU with the field size dependent output factors, inverse square law etc, he/she made an error.
This error showed up using diodes as the dose delivered was 15% lower than expected.
It showed up because at least some part of the expected diode reading was done independently of the MU Calculation, and the same mistake that was made in the MU Calculation was not repeated in the diode calculation.

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