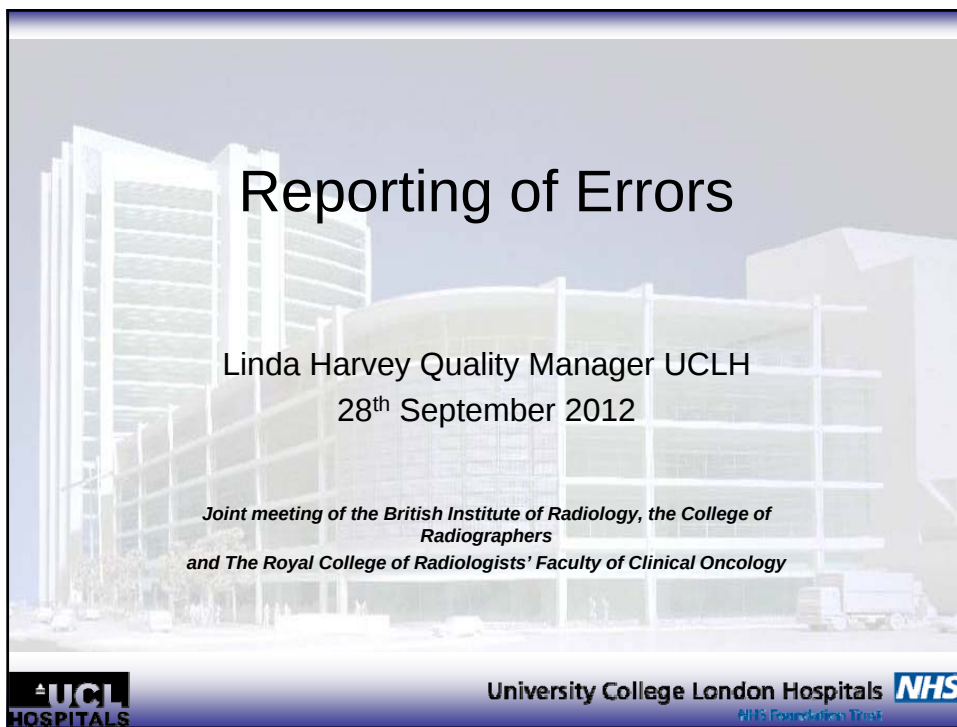


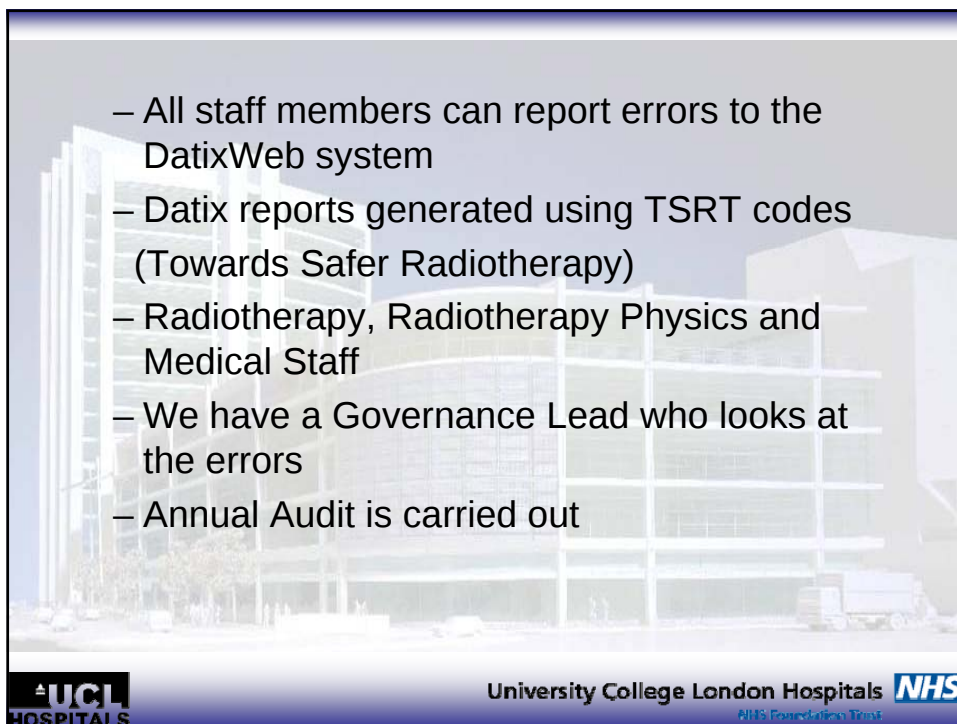


Reporting of Errors

Linda Harvey Quality Manager UCLH
28th September 2012

*Joint meeting of the British Institute of Radiology, the College of Radiographers
and The Royal College of Radiologists' Faculty of Clinical Oncology*

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- All staff members can report errors to the DatixWeb system
- Datix reports generated using TSRT codes (Towards Safer Radiotherapy)
- Radiotherapy, Radiotherapy Physics and Medical Staff
- We have a Governance Lead who looks at the errors
- Annual Audit is carried out

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- TSRT recommend that errors are analysed and any trends or areas of concern are highlighted to prevent recurrence.
- Sharing of data is good practice
- All departmental groups discuss errors monthly

All errors coded as recommended by TSRT



Datix system accessed via Hospital Intranet Home Page

University College London Hospitals NHS Foundation Trust - Incident Reporting Form

A * indicates a mandatory field.
Click the ? icon for help with a particular field.
Click the ▾ button to view and select from the list of available options for that field.
If you have any questions or require assistance with completing this form, [click here to e-mail your DATIX System Manager](#).

1. Reference	2. Incident details
3. Persons affected/involved	* What type of event is this? Radiotherapy Error
4. Investigation	Incident details
5. Equipment	* Who was affected? Incident affecting Patients
6. Medication	When did the incident occur?
7. Slips, trips, falls and collisions	* Incident date (dd/mm/yyyy) 03/09/2012
8. Blood Transfusion	Time of incident (hh:mm) 14:00
9. Pathology	Where did the incident occur?
10. Radiotherapy errors	* Board ? Surgery and Cancer Board
11. Research related	* Division Cancer Division
12. VTE related info	* Specialty Radiotherapy
13. Case Note issues	* Site University College Hospital
14. Central-venous catheter issues	* Type of location Radiotherapy
15. Unexpected Clinical Event info	* Exact location UCH - Podium - Basement
16. Action Plan	
17. Documents	

Print
Show DPI values
Audit trail

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- As soon as the Datix form is submitted an email is sent to the team leaders and heads of service
- This alerts the teams that an error has occurred
- Anyone can submit a form
- All forms need to be “handled” by a senior member of the team
- Incident is coded, risk rated and any outcomes recorded

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Definitions of radiotherapy errors

- Level 1** – Reportable radiation incident
 Reported to CQC under IRMER
 (Care Quality Commission – Ionising radiation medical exposures regulations)
 Geographical Miss
 Dose much greater than intended (MGTI)
 Incorrect Patient Identification
 Clinically Significant

Definitions of radiotherapy errors

- **Level 2** - Non-reportable – treatment given incorrectly, unable to be corrected for – potentially clinically significant
- **Level 3** – Minor radiation incident – treatment given incorrectly but can usually be corrected for

Definitions of radiotherapy errors

- **Level 4** – near miss – all processes have been completed as per the QA system but an error is picked up by someone who has a “gut” feeling that something is “not quite right” usually on the first day of treatment
- **Level 5** – Non-conformity – error picked up during QA checks usually after passing from one team to another

University College London Hospitals NHS Foundation Trust - Incident Reporting Form - Microsoft Internet Explorer

Address: http://unlmanweb/datsi/Incident.php?action=incident&recordid=14055

9. Mould room / workshop activities

10. Pretreatment activities / imaging (CT, simulation, mark-up)

11. Pretreatment planning session

12. Treatment data entry

13. Treatment unit process

14. On-treatment review

15. Brachytherapy

16. End of treatment process

17. Follow-up process

13. Treatment unit process

13A. Availability/timeliness of all required documentation
13AA. On-set imaging: approval process
13B. Patient ID process
13BB. On-set imaging: recording process
13C. Patient data ID process
13CC. Management of variations/unexpected events/errors
13D. Explanation/instructions to patient
13DD. Communication between treatment unit and VSR
13E. Confirmation of pregnancy/fertility status
13EE. Recording of patient attendance
13F. Assessment of patient prior to treatment
13FF. Recording of delivered treatment data
13G. Patient positioning
13GG. Recording of additional information
13H. Use of IVD according to local protocol
13HH. End of process checks
13I. Use of on-set imaging
13II. Identification of responsible staff
13J. Transfer of marks
13JJ. Other

Done Local intranet

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Datsi: University College London Hospitals NHS Foundation Trust - Incident Reporting Form - IE7 Virtual Browser for use at UCLH

Address: http://unlmanweb/datsi/Incident.php?action=incident&recordid=22682

Live Search

expect it to happen or recur but it is possible that it might do so

1 Rare - This will probably never happen/recur

Grade: Low risk

NPSA NRLS

Please ensure you complete this section -

Did any actions minimise the impact of the incident? Yes

Additional information

For completion by Risk Management Team only -

Is this an SE? No

Is a root cause analysis required? No

Is an Action Plan required? No

Does this incident need to be reported to the NPSA's NRLS? Yes

Is this incident RIDDOR reportable? No

CQC reportable? No

Select any additional external agencies that need to be notified

National Patient Safety Agency (NPSA)

CQUIN Reporting

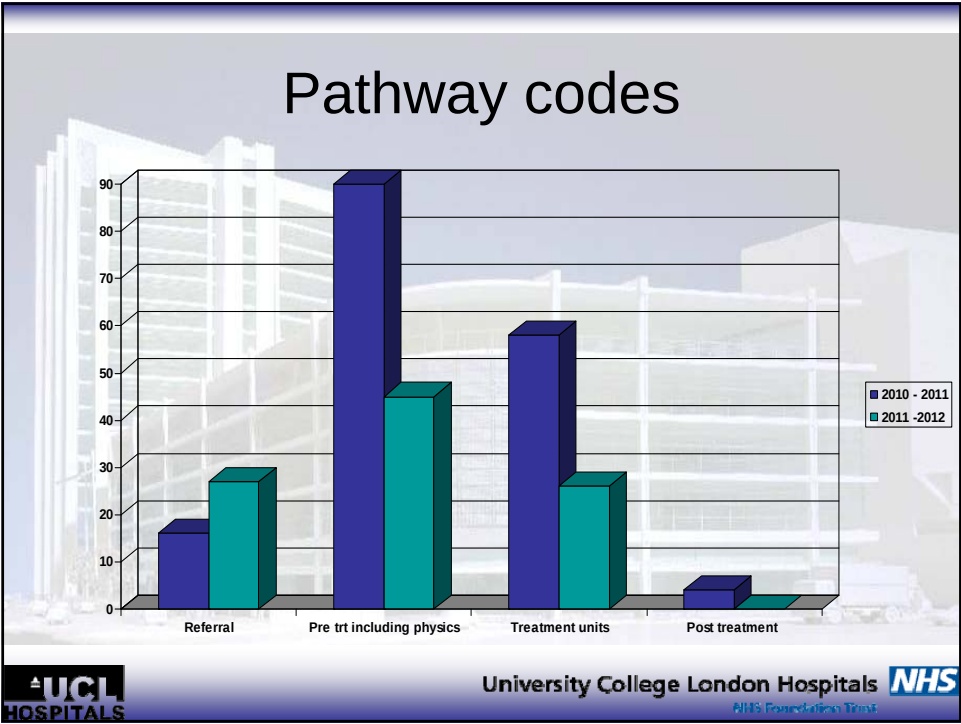
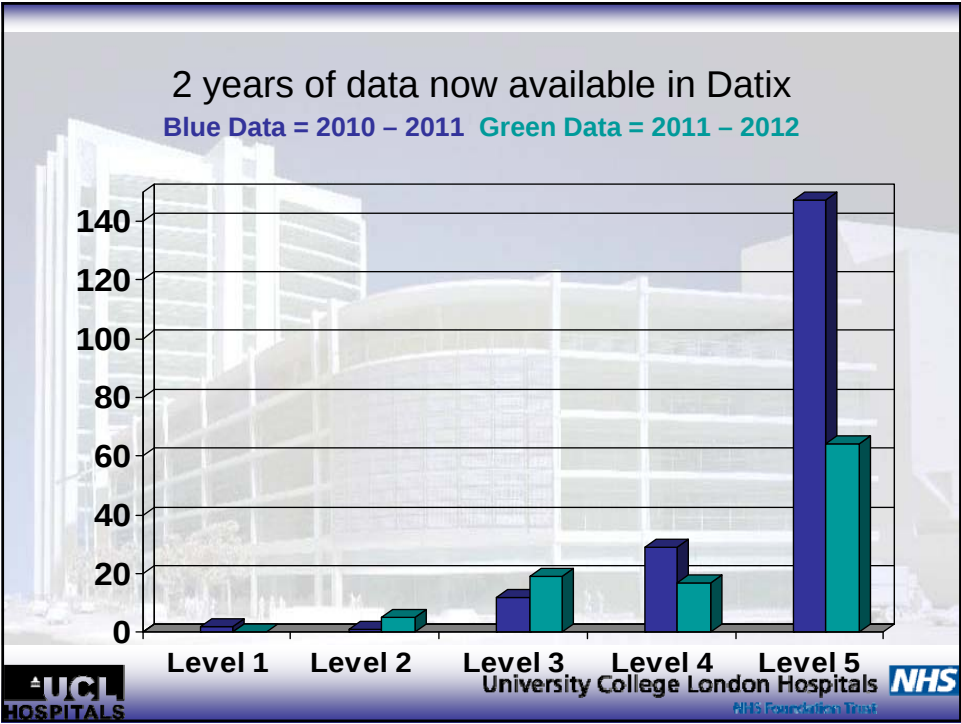
For completion by Risk Management Team only -

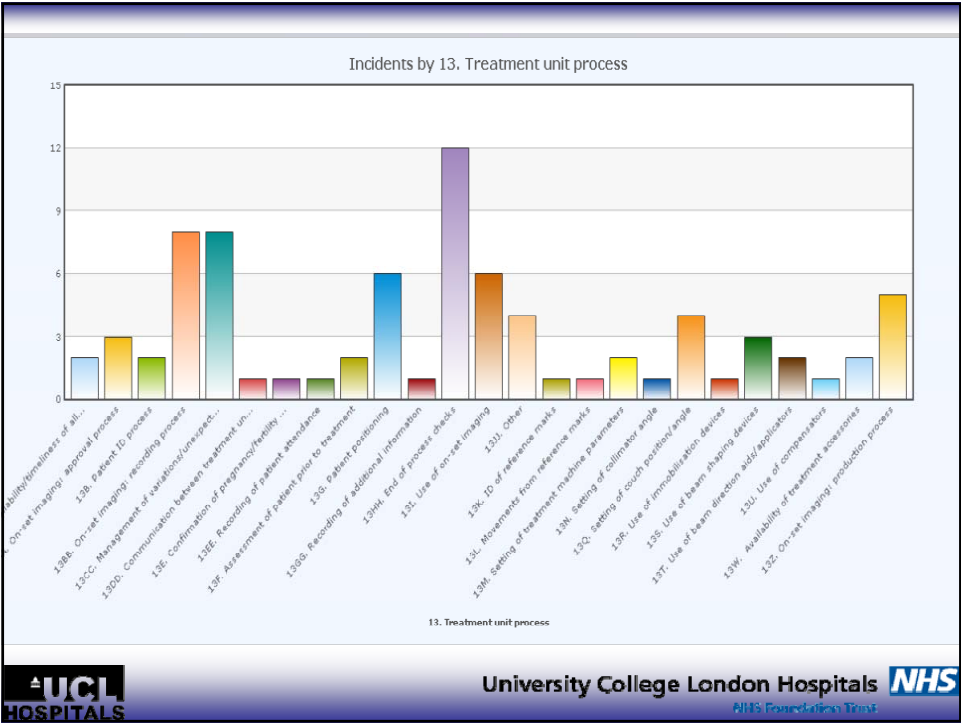
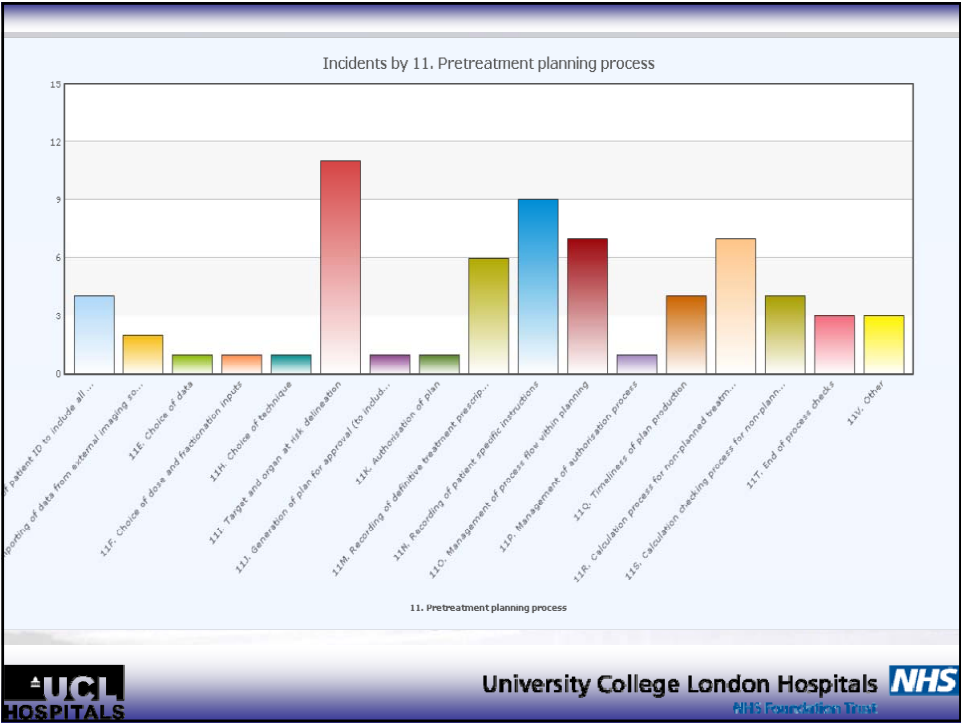
CQUIN Exempt? No

Save Cancel

Datsi Web 11.1.0.3 ©Datsi Ltd 2011

Datsi





- Management of unexpected events
There were 12 events – 2010 - 2011
6 - 2011 – 2012 - 50% reduction!
Only 1 so far this year – all staff at peer meetings encouraged to seek more involvement from senior staff – this gives support to the unit radiographers
- Areas requiring improvement - end of process checks on treatment units has increased from 8 - 12 = 33% increase

Trends and areas of improvement

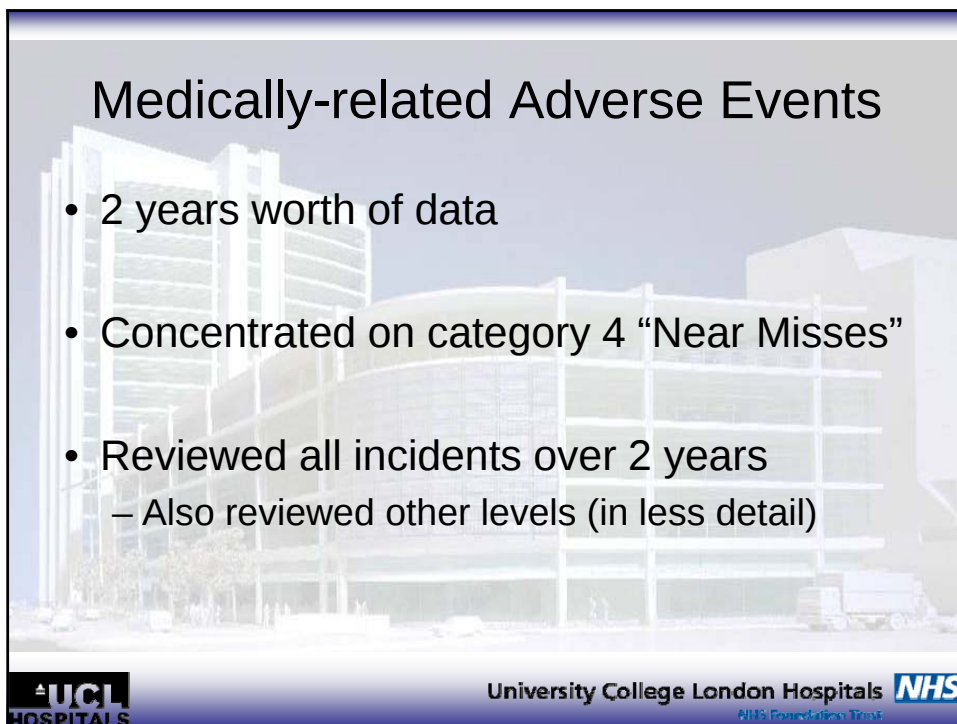
- Overall error rates are low average 0.8% error rate
- Key themes - numbers of incidents reported overall have gone down
- Paper less system now – the department used to have 3 different forms to report and record errors
- Areas of good practice – documentation errors in planning have gone down from 21 to 4 = 81% reduction!
- Errors related to the use of accessory devices (bolus) also went down by 50%



- Target and organ at risk delineation errors have increased
- 2 in 2010 – 2011
- 8 in 2011 – 2012
- Direct result of increasing complexity of treatment technique

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Medically-related Adverse Events



- 2 years worth of data
- Concentrated on category 4 “Near Misses”
- Reviewed all incidents over 2 years
 - Also reviewed other levels (in less detail)

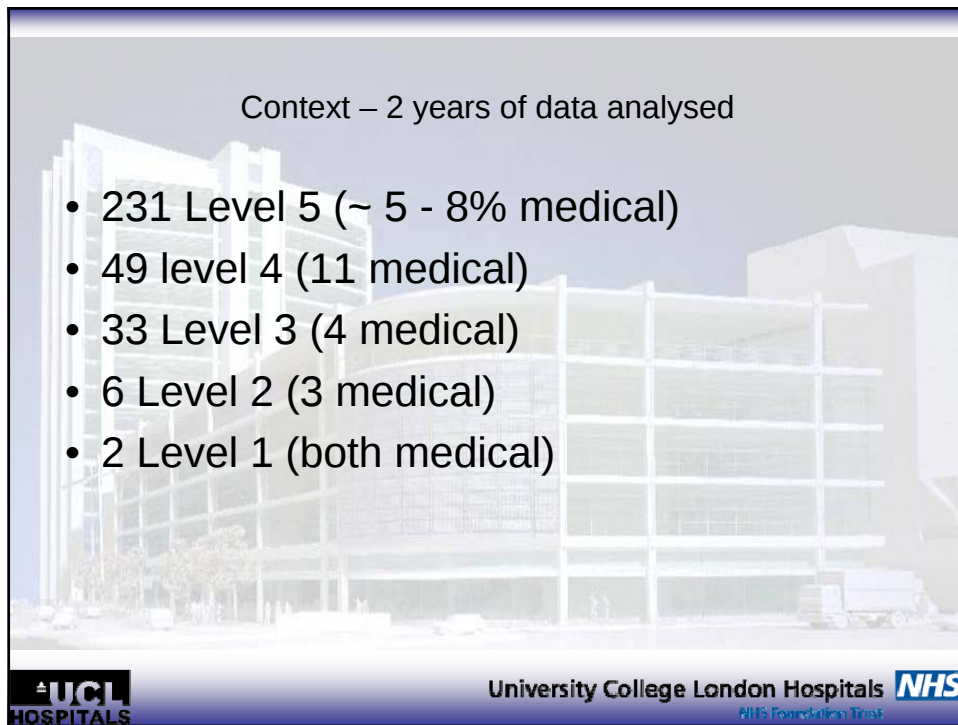
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Why “Near Misses”

- Category 5 are “caught” by the system
- Near Misses are:
 - Caught by chance
 - Have the potential to lead to higher level incidents
 - Are more common than higher level incidents

Near Misses

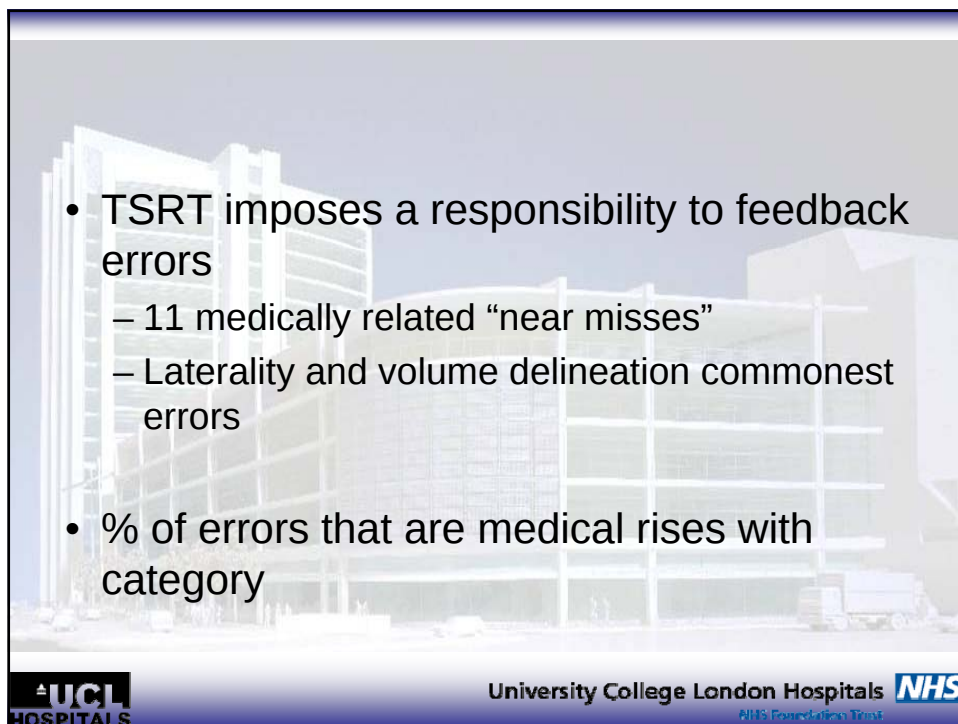
- 11 were related to medical practice
 - Target/ Organ delineation – 5
 - Laterality - 3
 - Prescription/ Tolerance – 1
 - Bolus – 1
 - Bowel Prep - 1



Context – 2 years of data analysed

- 231 Level 5 (~ 5 - 8% medical)
- 49 level 4 (11 medical)
- 33 Level 3 (4 medical)
- 6 Level 2 (3 medical)
- 2 Level 1 (both medical)

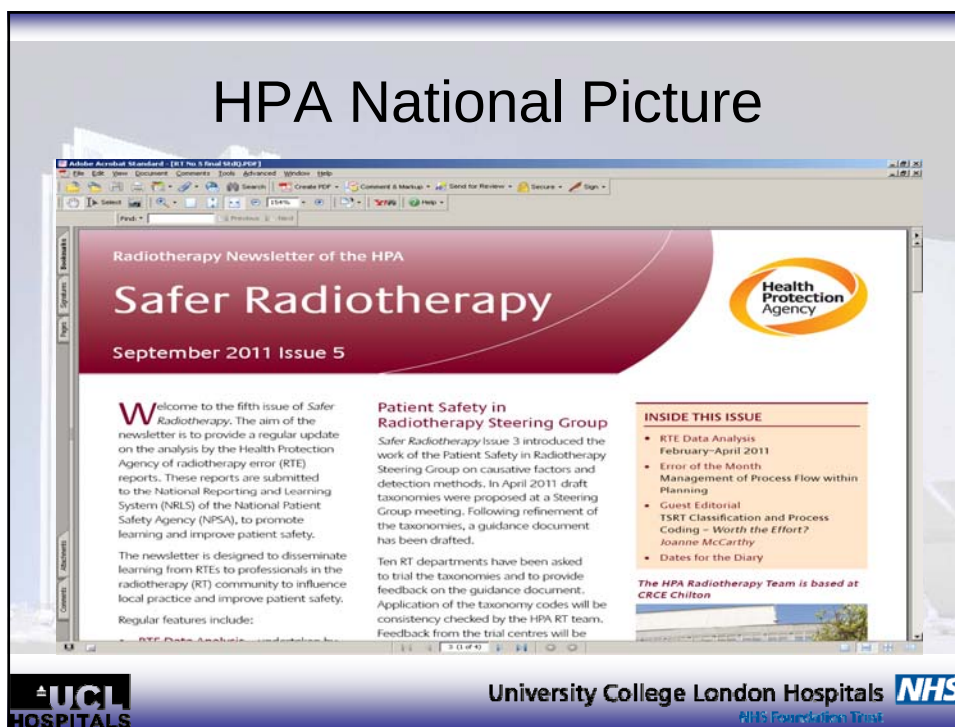
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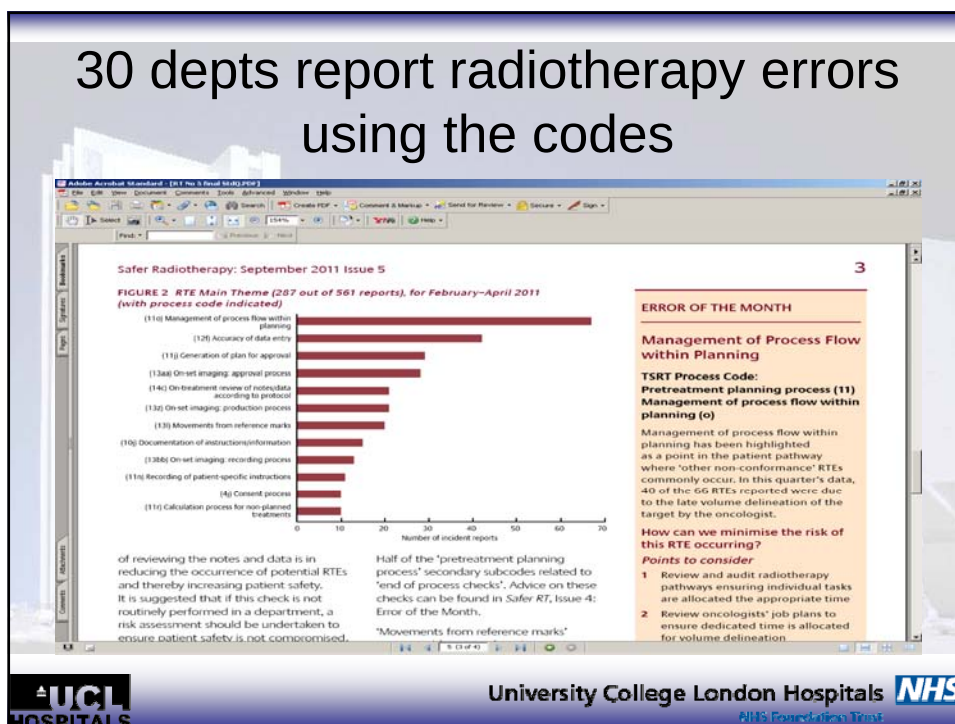
- TSRT imposes a responsibility to feedback errors
 - 11 medically related “near misses”
 - Laterality and volume delineation commonest errors
- % of errors that are medical rises with category

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HPA National Picture



30 depts report radiotherapy errors using the codes



Summary

- Why is RT different ?
 - Repeated exposures
 - Possibility for harm greater
 - Greater than what?
- Complex, technically advanced pathway, spread over many teams
 - Often developing new techniques

Next steps.....

- UCLH was asked to Pilot Phase 1 of the Causative Factor and Method of Detection Coding System being developed by the Health protection Agency

These codes have not been finalised yet and the examples shown still need further discussion

Causative Factor Taxonomy (Examples)

- Category **CF 1 Environmental**
- Sub category CF 1a Physical
- CF 1b Process
- Category **CF 2 Human**
- Sub-category CF 2a Knowledge-based
- CF 2b Rule-based
- CF 2c Skill-based

Method of Detection Taxonomies (Examples)

- Category **MD 1 System**
- Sub category MD 1a System change
- MD 1b Environmental cue
- MD 1c Checks / Checklist
- MD 1d Internal audit/review
- MD 1e External audit/review
- MD 1f National learning.....

Scenario:

On the final fraction of treatment for Mrs G's 3 field oesophagus plan (45Gy in 25#s) the R&V link failed and disconnected during treatment of a LAO beam. The linac control box indicated 30 monitor units had been given. The R&V system was exited and the Linac control screen froze resulting in the R&V system not recording the delivered 30 monitor units that had been given. Floor superintendent was called to reinstate the beam.

The plan had two LAO beams at the same gantry angle and the wrong one had been filled in to indicate the partial beam delivery on the treatment sheet.

Radiographers became aware of error whilst selecting remaining beams to be treated.

The calculated total dose discrepancy was deemed insignificant and no corrective action required.

What did we come up with?

(CF 4 = Technical).....

CF 4a - Machine Failure

MD 1b – Environment cue – Examples of these would be errors detected using on-treatment imaging, in vivo dosimetry, independent calculation software or the R&V feature of the OMS or the patient doesn't set-up

Benefits of using the codes

- CF – Collating causative factors may show emerging patterns that will support changes of procedures and systems.
- MD – This may show an effective area of detecting errors (lots of repeat codes)
- May show some obsolete checks (checks that never pick up errors that could be made redundant)

Thank you for listening!