

Radiation Related Incidents.

Did you know?

From April 2015 to March 2016 there have been 63 reported patient and staff radiation/radiology incidents at HEFT. 11 of these were reportable externally to the Care Quality Commission (CQC).

Themes and trends from these incidents are :

- X-ray requested for the wrong body part.
- Unnecessary repeated x-rays undertaken due to previous x-rays not being checked or reviewed appropriately.
- Irradiation on the wrong side e.g. left instead of right side and double exposures of the image plate.
- X-rays requested and undertaken on patients for check of NG tube position when the NG tubes were not in situ.
- Concerns raised regarding staff being irradiated due to not wearing their lead protection e.g. in theatre/wards when mobile examinations are undertaken.

A patient attended the radiology department for a post total hip replacement radiograph of their pelvis. Upon developing the image no hip prosthesis was seen and the patient was discovered to have had a total knee replacement instead. This incident was externally reportable to the Care Quality Commission due to the unnecessary additional radiation received by the patient. *This case highlights the need to request the appropriate study and give the correct clinical information for each patient.*

CT's are high doses of radiation and are potentially harmful to patients. A single CT chest is equivalent to 440 chest x-rays. One patient at HEFT received an unnecessary CT Abdomen. The unintended dose received was 12mSv equating to 4.5 years of background radiation exposure. This is calculated to have a lifetime fatal cancer risk of approximately 1:10,000.

Lesson of the month

It is everyone's responsibility to ensure the **right** patient has the **correct** examination and is not irradiated unnecessarily. **All referrers have legal responsibilities under Ionising radiation medical exposures 2000 regulations IR(ME)R2000 to provide correct clinical details (name, PID, reason for examination) to ensure that the patient's exposure to radiation is justified.**

Referring to Radiology – Pause and Check

- ✓ the correct identity and PID of the patient before submitting the referral.
- ✓ the patient's clinical history to ensure the correct examination is requested.
- ✓ that the patient has not recently undergone the same examination.
- ✓ that you are not entering multiple referrals, particularly at the end of the clinic.

Ward and portering staff – Pause and Check

- ✓ that the correct patient has been identified before they leave the department.
- ✓ the correct examination has been requested for the patient.
- ✓ with the patient that they know what examination they are having (where applicable)
- ✓ that the patient has an NG tube in situ if an x-ray is required to check the NG tube position.

Imaging services - Pause and Check

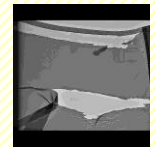
- ✓ the correct identity and PID of the patient before carrying out the examination
- ✓ that the area of examination is correct.
- ✓ previous images to ensure that the patient has not recently undergone examination.
- ✓ that the patient has an NG tube in situ before undertaking an x-ray to check NG tube position.

For your protection.

- ALWAYS** use the appropriate lead protection in theatre/wards and ensure that you wear your dose monitoring meter. Body dose cannot be monitored unless this is worn.
- ALWAYS** escalate any concerns if you think that you are receiving excessive radiation exposure? Additional monitoring i.e. eye and hand dose monitoring can be undertaken.
- ALWAYS** ensure that you hang up your lead coats correctly.



Not hanging coats correctly can cause damage such as cracks and tears which increases the risk of radiation exposure .



Please refer to the following sites for further resources and training:

- IR(ME)R 2000 Procedures/protocols under: [Imaging](#)
- Radiation protection for cardiology e-lfh.org.uk

Non Medical Referrers:

Ensure that your IRME(R)2000 update training is undertaken every five years.

Medical Referrers:

For updates access the free e-learning module e-lfh.org.uk/e-IRMER