National Radiation Protection Office Update 18th February 2021

Radiation safety incidents reported on the National Incident Management System (NIMS) Q4 2020

This report details all radiation safety incidents reported by hospitals on the NIMS from October to December 2020. The figures listed below do not include incidents related to ultrasound, MRI or issues with peripheral vascular catheters.

1. Category of radiation safety incident

Category of incident	Radiology	Radiotherapy
Actual incidents	163	3
Near miss events	45	89
Total number of reports	**208**	**92**

2. Category of person affected by the radiation safety incident

Category of person	Radiology	Radiotherapy
Adult patient / service user	164	92
Paediatric / adolescent patient	23	0
Staff member inadvertently exposed to radiation	21	0

3. Details of the process involved in the incidents.

Radiology incidents reported on the NIMS in Q4 2020						
Process	**Severity Rating**					**Total**
	Extreme	**Major**	**Moderate**	**Minor**	**Negligible**	
Checking patient identification					11	**11**
Clinical details on referral					59	**59**
Documentation / records	1		1		25	**27**
Communication / consent issues					10	**10**
Equipment failure				1	25	**26**
Performing procedure			1		38	**39**
Pregnancy status					1	**1**
Not applicable / unknown			1	2	32	**35**

The report categorised as extreme refers to an incident where a patient presented to an emergency department and underwent imaging procedures. There was no documentary evidence of clinical follow up. The patient presented a year later with the same issue and died.

The 35 reports categorised as *not applicable / unknown* refer mainly to inadvertent staff exposures, for example, practitioners declining to wearing personal protective equipment, staff entering a room during a procedure or spillage of a radioactive material for injection.

Radiotherapy incidents reported on the NIMS in Q4 2020						
Process	**Severity Rating**					**Total**
	Extreme	**Major**	**Moderate**	**Minor**	**Negligible**	
Checking patient identification					1	**1**
Clinical details on referral					2	**2**
Communication / consent issue					2	**2**
Equipment					6	**6**
Documentation / records					60	**60**
Performing procedure					21	**21**

4. The problems recorded in the radiation safety incidents reported in Q4 2020

Radiology incidents reported on the NIMS in Q4 2020						
Problem	**Severity Rating**					**Total**
	Extreme	**Major**	**Moderate**	**Minor**	**Negligible**	
Diagnostic exposure greater than intended					20	**20**
General exposure related issue					27	**27**
Failure / malfunction of process	1		1	1	35	**38**
Wrong body part / side /site					49	**49**
Inadvertent deterministic effect				1	1	**2**
Inadvertent dose to foetus (>1mSv)					1	**1**
Wrong patient (>1mSv)					14	**14**
Wrong patient (<1mSv)					7	**7**
Wrong treatment / process / procedure					19	**19**
Not applicable / unknown			2	1	28	**31**

The 31 reports categorised as *Not applicable / unknown* refer to incidents which involved failures in the administrative process and in performing procedures.

Radiotherapy incidents reported on the NIMS in Q4 2020						
Problem	**Severity Rating**					**Total**
	Extreme	**Major**	**Moderate**	**Minor**	**Negligible**	
Wrong treatment / process /procedure					81	**81**
Other					11	**11**

The 11 reports categorised as *Other* relate to communication issues within the team, delayed receipt of referrals and failures to meet HIQA guidelines on treatment timeframes.