X-SPECT MEDICAL PHYSICS SERVICES

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ADVICE ON HSE COMPLIANCE REVIEW QUESTIONNAIRE & CLINICAL AUDIT

The Questionnaire is divided into 4 main headings;

1. **Details**
2. **Activity**
3. **X-Ray Equipment**
4. **Clinical Audit**

Details

Details of your licence from the Radiological Protection Institute of Ireland are requested here.

Activity

The questionnaire asks for the **number of exposures taken in the past 2 weeks for peri-apical/bitewings, occlusal, panoramic, cone beam, and other examinations**. This information is requested to allow the National Radiation Safety Committee (NRSC) to calculate the approximate numbers of each procedure performed in Ireland per year, and ultimately to allow them to calculate average population dose from dental radiography. In order to provide this information going forward you will need to start keeping easily accessible records of patient exposures. Many practices maintain a log book of x-ray exposures which details the date, patient details, type of x-ray, and the clinical indication, etc. You could also include a column for any repeats or image quality issues, or any other data that might be used for audit purposes.

Under this section, you are also asked **if a patient's individual dose can be ascertained from the records**. This is important for audit purposes and to ensure that patient doses are below national diagnostic reference levels (DRLs). It is therefore important that you have a documented record of the exposure factors used for each type of exposure, both for adults and children (exposure time and kV/mA if variable). Even if you have anatomical exposure settings, I would recommend that this should be documented for each x-ray unit in the practice, and should be reviewed annually. The dose can be calculated from this data using a reference dose measured by the RPA during the 2 yearly equipment tests.

Finally in this section you are asked **"Does each patient record demonstrate a written justification for each exposure".** Under S.I. 478 of 2002, all radiographs must have a written justification which includes clinical information and type of radiograph required. You must also have written referral criteria to aid in the justification process. Many practices use the "Selection Criteria for Dental Radiography" published by the FGDP (UK) in 2004. The justification process involves ensuring that the clinical indications for an x-ray examination are consistent with the referral criteria.

X-ray Equipment

Your x-ray equipment must be tested by your RPA every 2 years as a condition of your RPII licence. Similar parallel criteria of acceptability are being developed by the NRSC. This section asks if the equipment was tested, when, and by who. An RPA must be included on an RPII register of qualified

RPAs. You are also required to appoint a Medical Physics Expert (MPE) under SI478, and you should ensure that your RPA has agreed to act in this capacity also.

Clinical Audit

Under SI478, you are required to carry out clinical audit as per criteria adopted by the Dental Council. These criteria were published by the Council in 2008 under 10 headings, and you are asked in the questionnaire if audit has been completed, or is in progress, under each heading, and when it was last conducted.

Clinical audit is basically a continuous self assessment system where you score yourself to evaluate performance under each criterion. You must also provide evidence to justify your scores so that the audit would stand up to the scrutiny of an external audit or inspection. All of your audit evidence should be maintained in your compliance folder so that it can be easily retrieved and presented.

There are two audit tools available which describe how to evaluate your practice under each audit criterion. It is unclear whether either has been formally endorsed by the NRSC, but they are the only practical guidelines currently available.

1. "An Introduction to Audit Compliance with SI 478 (2002) In Dentistry", Produced by the Audit Subcommittee of the Dental Radiation Safety Committee of the HSE Dublin North East and Dublin Mid Leinster (February 2009). (http://www.hse.ie/eng/about/Who/HSE_An_Introduction_to_Clinical_Audit_in_Dentistry.pdf).
2. "Clinical Audit in Dental Radiology, published by the Irish Dental Association (2009). This is available to IDA members at http://www.dentist.ie/.

The first document is probably tailored more for HSE dental facilities, but it gives a very detailed breakdown on how to assess practice under each criterion. For many of the criteria, compliance can be demonstrated by compiling much of the documentation that the practice is probably already using (e.g. Radiation Safety Procedures). For others you will need to conduct surveys in order to produce the necessary evidence to score yourself (for example, take a sample of your previous films, and determine whether they were all justified in accordance with your selection criteria). Both documents give instructions on how to assess image quality, and the IDA document gives detailed instructions on how to assess your film processor.

It is recommended that you begin to use one of these audit tools (or a combination of both) for at least some of the criteria. Begin by assessing those criteria for which you already have documented evidence. For these, you can then answer "Work In Progress" on the questionnaire. I would then recommend that you start addressing the other criteria gradually, and keep all of your audit forms and evidence in your compliance file. There is no reason why your audit activities cannot be spread out over a long period of time (i.e. it should not need to done all at once).

Clinical audit is supposed to be an on-going process of quality improvement for the practice, and it is important that you view it as such, rather than as an administrative headache. It will be essential for any practices who aspire to some form of accreditation, and much of the evidence will have already been generated for those practices already engaged in accreditation. However, audit requires time resources, and I would recommend that you set aside a period of your time (or of a member of staff) on, say, a monthly basis, for audit purposes.

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