

SUMMARY OF RADIATION PROTECTION FILE

THIS DOCUMENT HAS BEEN PRODUCED TO SATISFY THE REQUIREMENTS OF THE FREEDOM OF INFORMATION ACT 2000 AND REPRESENTS A SUMMARY OF OUR PROCEDURES TO ENSURE COMPLIANCE WITH THE IONISING RADIATIONS REGULATIONS 1999 (IRR99) AND THE IONISING RADIATION (MEDICAL EXPOSURE) REGULATIONS 2000 (IRMER). OUR FULL RADIATION PROTECTION FILE FOLLOWS THE MODEL PRODUCED BY OUR RADIATION PROTECTION ADVISERS (THE RADIATION PROTECTION DIVISION OF THE HEALTH PROTECTION AGENCY – FORMERLY THE ‘NRPB’) AND IS AVAILABLE FOR INSPECTION UPON REQUEST.

REVIEW LOG

This Radiation Protection File will be reviewed periodically to ensure that it remains relevant and effective. It will be reviewed at least annually.

This Radiation Protection File and its contents will be brought to the attention of those directly involved with dental x-rays.

LOCAL RULES

Local Rules are kept by each x-ray unit and contain the following information:

- (a) Name of the appointed Radiation Protection Adviser (Radiation Protection Division of Health Protection Agency).
- (b) Name of the appointed Radiation Protection Supervisor (Andrew Hall).
- (c) The identification and description of each controlled area and a summary of the arrangements for restricting access.
- (d) An appropriate summary of the working instructions.
- (e) Identification or summary of any contingency arrangements indicating the reasonably foreseeable accidents to which they relate.
- (f) The dose investigation level (1mSv).

The local rules have been drawn up by the Legal Person (Andrew Hall) in consultation with the Radiation Protection Adviser.

LEGAL PERSON'S WRITTEN PROCEDURES FOR PATIENT PROTECTION

• Patient Identification

In order to ensure that the wrong patient is not x-rayed, where there is any possibility of error (for example if a patient is referred to another site or operator), the patient will be asked to confirm their name, address and date of birth.

- **Staff Appointments**

The operator is the person who carries out all (or part) of the practical aspects of the exposure (ie. selecting exposure parameters and/or positioning the film, the patient and the tube head, pressing the exposure button, processing films, quality assurance, exposing test objects as part of the QA programme).

The following staff have been authorised to act as operators in the following capacities:

- Referrer:
 - Olga Hall (Dentist)

- IRMER Practitioner:
 - Olga Hall (Dentist)

[This person takes responsibility for justifying and authorising individual exposures.]

- Film processing operators:
 - Olga Hall (Principal Dentist)
 - Renata Kimso (Dental Nurse)
 - Michelle Dunnell (Receptionist)
 - Serena Ryder (Dental Nurse)
 - Andrew Hall (Practice Manager)

All of the above staff have received the relevant training commensurate with their duties and this is documented in the Radiation Protection File.

- **Medico-Legal and other Third Party Exposures**

- The need for and usefulness of medico-legal and other third party exposures will be considered before the exposure is justified and authorised.
- The patient's informed and written consent will be obtained before such an exposure is carried out.

- **Justification of Exposure**

Before justifying an exposure, the IRMER practitioner should take account:

- The availability and findings of previous radiographs.
- The specific objectives of the exposure in relation to the history and examination of the patient.
- The diagnostic benefit to the patient.
- The radiation risk associated with the radiographic examination.

- The efficacy, benefits and risk of available alternative techniques having the same objective but involving less (or no) exposure to ionising radiation.

The benefit should outweigh the detriment of the exposure. The exposure would normally be expected to provide new information to aid the patient's management or prognosis.

- **Authorisation of Exposure**

- Each radiograph will be recorded in the patient's record card and initialled by the IRMER practitioner. Any subsequent audit should be able to identify who made the clinical examination and who authorised any particular exposure as justified.

- **Pregnant Patients**

It is not normally necessary (except in the unlikely occurrence of a vertex occlusal projection – see below) to enquire if a patient may be pregnant for the purpose of taking a dental exposure because the pelvic area is not irradiated and because of the very small dose involved. However, a pregnant patient can be given the option of delaying radiography if she is particularly concerned about any adverse effects and if this will not be detrimental to her treatment. It is not necessary to use a lead apron except in the circumstances referred to below:

- **Lead Aprons/Irradiation of the Pelvic Area (eg Vertex Occlusal Projection)**

If the radiographic examination is such that the pelvic area may be irradiated the following action should be taken:

- a) The operator should ask the patient whether she is, or might be, pregnant and record the response.
- b) If there is no possibility of pregnancy, the radiographic examination can proceed.
- c) If the patient is definitely, or probably, pregnant, the situation should be reviewed as to whether to defer the investigation until after delivery. If the examination is carried out, the foetal dose must be kept to a minimum consistent with the diagnostic purpose. In such situations the use of a lead apron is advised, principally because of the reassurance that it provides.
- d) If the patient cannot exclude the possibility of pregnancy, she needs to be asked whether her menstrual period is overdue. If pregnancy cannot be excluded but her menstrual period is not overdue, the examination can proceed. If her period is overdue, the advice in paragraph (c) should be followed.

- **Optimisation**

In order for the operator to ensure that patient's x-ray exposures are kept as low as reasonably practical for diagnostic purposes, this Practice

uses only x-ray sets which have pre-set exposure settings for each type of standard projection.

QUALITY ASSURANCE

Procedures within the QA programme will be checked by a nominated member of staff and recorded monthly, quarterly or on an annual basis.

PATIENT DOSES

The representative patient dose will be assessed as part of each routine test. At present these tests are carried out three-yearly. The diagnostic reference levels will be reviewed by the Legal Person in the light of these findings. The ongoing QA programme will ensure acceptable quality of radiographs.

CLINICAL EVALUATION OF RADIOGRAPHS

Each radiograph shall be evaluated in writing by the dentist treating the patient (or prescribing treatment where the patient is treated by a therapist or a hygienist) and provide information sufficient for a later audit. For example:

- (a) Caries can be charted.
- (b) Only findings relevant to the patient's management or prognosis need to be recorded.
- (c) For a pre-extraction radiograph record for example 'root form simple' or 'nothing abnormal diagnosed'.

ACCIDENTAL OR UNINTENDED DOSE TO PATIENTS

The possibility of accidental or unintended dose shall be minimised by following the standard operating procedures for exposure settings and by immediately releasing the irradiation switch and switching off from the mains supply in the event of:

- o An exposure failing to terminate after a pre-set condition.
- o The failure of rotational movement of panoramic equipment.

The Radiation Protection Supervisor and Legal Person shall be notified immediately and the advice of the Radiation Protection Adviser sought.

CLINICAL AUDITS/PEER REVIEWS

Clinical audit and/or peer review will be provided for and carried out in accordance with national arrangements.