UNC SCHOOL OF DENTISTRY
INSTITUTION POLICY REGARDING THE USE OF
IONIZING RADIATION

Updated 3/19/17

1. Physical facilities

   a. All existing radiographic equipment and facilities shall meet all regulations
      specified and/or recommended by the Federal Radiation Health and Safety Act of
      1969, NCRP Handbook, No 145 Radiation Protection in Dentistry, the ADA
      recommendations on acceptable radiographic practices. The use of dental
      radiographs-Update and recommendations. JADA 2006; 137:1304-1312 and the
      North Carolina Regulations For Protection against Radiation, November 1, 2007.

   b. Radiographic facilities shall be designed to maximize student, operator, and patient
      protection from unnecessary exposure to ionizing radiation.

   c. Digital imaging (PSP and CCD, CMOS receptors, scanners, etc) shall be
      monitored on a regular basis to promote consistency in image quality.

2. Radiation Safety

   a. Radiographic equipment and technical procedures shall be in compliance with State
      and Federal radiation safety standards, rules and regulations.

   b. Technical procedures will be utilized according to the ALARA-principle (As Low
      As Reasonably Achievable) in order to limit the radiation exposure to a level that
      is sufficient to obtain adequate radiographic information for patient diagnosis,
      treatment planning and follow-up.

   c. Only qualified and authorized persons shall expose patients to ionizing radiation.
      DDS, RDH, CDA, RT’s and students who have obtained radiographic pre-clinical
      competence will be allowed to expose patients under faculty supervision,

   d. Personnel radiation monitoring will be offered to those individuals who frequently
      make exposures or supervise radiography students and those who request such
      service. Personnel radiation monitoring is not required by N.C. regulations
      governing dental radiation exposures as practiced in the School of Dentistry.
3. **Instructional/teaching support for clinical activities**
   
a. Supporting technical staff shall be knowledgeable and skillful in oral radiography procedures and the safe use of ionizing radiation.

b. Radiology faculty shall possess appropriate training in oral and maxillofacial radiology.

c. Students shall be closely supervised by faculty or staff during all clinical radiographic procedures conducted on patients, except in the case of competency exams. Exposures shall be made only after faculty authorization. The retaking of radiographs shall be authorized and supervised by a faculty member or supervising technologist.

d. If possible a student/faculty ratio of 5:1 should be maintained during exposure of patients in the radiology clinic.

e. Techniques to minimize patient exposure shall be emphasized (e.g., long open shielded position indicating devices (PID’s), lead aprons, film holding devices, high-speed receptors, the use of XCP instruments and rectangular collimators when appropriate.).

4. **Institutional obligations to the patient**
   
a. Patients shall not be subjected to retakes to satisfy technical perfection.

b. Students shall not serve as live technique mannequins and shall not expose each other for practice unless clinically indicated.

c. Patients shall not be subjected to administrative radiographic examinations prior to initial screening and consultation.

d. Radiographic images shall be made available to private practitioners or other appropriate professionals when so requested by patients who indicate they no longer desire treatment or care at the institution.

e. Radiographic images shall be limited to the minimum number needed to obtain diagnostic information required for the patient’s dental needs and should be prescribed following the ADA/FDA guidelines for prescribing dental radiographs.

5. **Institutional obligations to the student**
   
a. Students shall be taught to critically assess the need for diagnostic radiographic information and to evaluate the risks and benefits to the patient before ordering the radiographs

b. Students should be well prepared to assume the challenge of clinical dental radiography and shall receive appropriate guidance from faculty and staff.

c. Technical competence in radiographic procedures shall be achieved on mannequins prior to clinical assignment; students should be taught to recognize clinical situations in where it may be necessary to compromise technical perfection.
d. Students shall not be allowed to retake a radiograph without the authorization of a faculty member. Direct supervision by faculty or staff during retake procedures is required.

e. Students shall achieve radiologic competence and should be prepared to establish a program showing adequate concern in selecting equipment and following procedures to minimize exposure to patients

6. **Ordering of Radiographs** -- The purpose of the following policy is to provide a guide to the clinician in prescribing radiographic images. Radiographic images shall be prescribed only in cases when the information cannot be obtained otherwise.

**General Guidelines**

a. Radiographic images shall be prescribed by faculty members and/or graduate students holding the D.D.S./D.M.D. degree and who are licensed to practice dentistry within the UNC School of Dentistry.

b. Radiographic images shall be ordered only after an appropriate clinical examination and patient interview have been completed in order to establish the necessity for radiographic images and to determine which radiographic examination will most effectively contribute to an accurate diagnosis.

c. The frequency and type of radiographic images that are taken to aid in routine maintenance of a patient’s dental health varies and the decision shall be made based on individual patient needs.

*Note: For more specific guidelines refer to the ADA/FDA “Guidelines for prescribing dental radiographs”.*

[http://www.ada.org/prof/resources/topics/radiography.asp](http://www.ada.org/prof/resources/topics/radiography.asp)