
Editorial

Dental radiography for children

The commissioner on radiological health of Iowa has developed a document that will direct, control and regulate radiation in Iowa. This document has the endorsement of the Iowa State Board of Health, and a public hearing will be held in the near future. Potentially new regulations would become effective as early as October of 1980. Many other states probably have similar programs in various stages of implementation. Concerns about radiation hygiene is widespread in the health professions which is not surprising, particularly because of the accident at the Three Mile Island nuclear power plant. Many parents have indeed inquired about the need and frequency of taking dental radiographs for children for quite sometime, and some parents have insisted that their child not receive any radiographs at all.

At the recent accreditation site visit by the Commission on Accreditation of the American Dental Association to The University of Iowa, the accreditation team was meticulous in checking the radiation practices and policies of the College of Dentistry. A statement on radiation protection was developed by the College of Dentistry in anticipation of the Commission's concerns. Several major questions appear to be of concern to radiation control boards, and to the dental profession and the public alike. There will most likely be more stringent and definitive regulations about installation of new equipment, and the inspection and maintenance of existing equipment. The necessity of recording every single radiographic exposure together with the kilovoltage and the milliamperage/seconds used for such exposures may become a part of such requirements. In addition, regulations regarding qualified personnel who will be permitted to operate dental radiation equipment also appear to be forthcoming. These regulations have widespread implications for the dental profession and particularly

for pedodontics where cumulative doses of radiation may be a concern.

It is timely that the review article by Drs. Valachovic and Lurie in this issue deals in depth with the risk/benefit considerations on radiation for pedodontic practice. The biological and technical aspects of radiation have been updated in this article. Valachovic and Lurie concluded that "the most efficient means of dose reduction is through the appropriate use of radiographs only where there is a predicted diagnostic yield which is expected to impact on the patient's treatment." In addition, the authors have raised some doubts regarding the diagnostic value of panoramic radiographs and have reservations about its widespread clinical use as a screening tool. The author suggested that periapical radiographs taken for more specific diagnostic goals are preferable to panoramic films. Other methods to reduce radiation for children have also been suggested. Whenever there is a need to diagnose a clinical condition which otherwise cannot be obtained without radiographs, there is strong justification to expose the necessary radiographs for such diagnostic purposes.

The patients should be examined clinically to determine whether there is a need for radiographs, and these decisions should not be delegated to auxiliaries. The clinician must also determine the best possible views with the minimum amount of exposure consistent with a proper diagnosis.

Not only should pedodontists be able to cope with changing societal concerns and rigorous radiation control regulations, they should be leaders in developing such guidelines so that high quality diagnostic radiographs can be obtained with a minimal amount of radiation to the child patient.



STEPHEN H. Y. WEI
Editor