Did you know?

And Yet Even More Selections from the Iowa Administrative Code.

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At this point you may be wondering if this will ever stop. The answer is yes…and no. Yes, in that eventually I shall reach the end of the sections of the Iowa Administrative Code (IAC) that pertain to us as dentists (and remember that I am skipping over items not directly germane to our practices) and no, because there are constantly changes being proposed to the IAC that we should be aware of, as they may make us change some of our practices. Fortunately such proposed changes are circulated to the many organizations, including the IDA, whose members may be affected by these changes, and the Iowa Department of Public Health does respond to concerns that these groups may have. Also, there are open hearings about such proposed changes.

Meanwhile, back at the code…

> Ch 41, p.10 Public Health[641] IAC 4/2/03
> *g.* Retention of films. Record retention of films shall be seven years for patients 18 years of age or older and seven years plus the difference between the patient's age and 18 for minors.
> (1) If the facility is currently utilizing hard-copy film to store images, it may continue to use this method throughout the retention period.
> (2) If the facility is currently utilizing computer media and also storing images in a hard-copy format, it may continue to use this method of retention throughout the retention period. If the images are also on computer media, the data should be backed up, or refreshed, at appropriate intervals as defined by the facility.
> (3) If the facility is solely utilizing computer media to store study information for which a report is generated, the recording media is to be stored in conditions that will ensure that deterioration will not occur for the period required by this policy. The facility must maintain either retrieval or access or both to the stored images.
> (4) If a patient's medical images are identified as being involved in a legal case, the records should immediately be coded appropriately, and maintained for the required time frame defined in this paragraph. At the time the records have reached the end of the appropriate time frame for retention, the previously identified responsible individuals involved in the legal action should be contacted for further instruction.
> (5) If records are temporarily transferred to any party, appropriate information relating to location, date of release, and individual having custody of the records should be maintained.
> (6) A facility that is ceasing operations must either transfer its film records to another facility or provide the film records to its patients. A certified letter as to the location, or disposition, of the film records must be sent to notify the patients of the transferal.

There is something for all of us in the above section. Most of it is straightforward. The intent is that no records are destroyed that may be needed in a legal matter arising from these. The seven years is a widely used time frame after which it would usually be unreasonable for anyone to bring an action. In the case of a minor, which in this case is someone under the age of 18 years, the seven years starts from the age of majority.

Hence, the records, including the radiographs are to be kept for seven (7) years from the time the individual reaches the age of 18 years.

The section that states "[i]f the images are also on computer media, the data should be backed up, or refreshed, at appropriate intervals as defined by the facility" brings up an interesting point. Increasingly, governmental agencies and large corporations whose records have been kept digitally (on computer-based storage media) have become aware that no single storage medium lasts forever. Magnetic storage media (tape or floppy disks) are subject to magnetic fields and other forms of deterioration. CDs and DVDs may become unreadable because their superficial plastic layers can become opaque, and thus not scannable by laser. Added to this are the ever changing software and hardware that read these. Try to find disk drives and software that will read your 5 ¼" floppies. And they were the standard about 18 years ago. Or try to open a document created by a very old version of your word-processing program using today's version of the same software. Or, try to play your 8-track cassettes. Your practice may well outlast several iterations of digital storage technologies. Hence, backing up and refreshing your digital data may overcome the deterioration and obsolescence.

Also in this is the concept of maintaining data off site. It is a good idea to have your data backed up regularly (and to have this automated, as this data is your practice and thus your livelihood). You can do this by having a second separate storage area in your home or another office, or through a commercial storage provider, also known as an application service provider (ASP). Having and maintaining access to your data if stored off-site is also important. The records must be secure, so that no one else can access them, because of HIPAA requirements, but there must be a clearly stated accessibility, in case your storage provider goes bankrupt or is bought by another company. The dentist should know who owns the data, the hardware, the password and the encryption. Also transmission should be secure. But I digress.

> **41.1(4)** *General requirements for all diagnostic X-ray systems.* In addition to other requirements of this chapter, all diagnostic X-ray systems shall meet the following requirements:
> *a.* Warning label. The control panel containing the main power switch shall bear the warning statement, legible and accessible to view: "WARNING: This X-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed."

We use stickers that we obtain from our Health Protection Office at the University of Iowa, but I do not believe that there is a specific format for these. So, if there is not such a label on your unit, you can create on with the specified wording.

> *b.* Battery charge indicator. On battery-powered X-ray generators, visual means shall be provided on the control panel to indicate whether the battery is in a state of charge adequate for proper operation.

This is not a likely type of x-ray unit in routine dental practice.

> *c.* Leakage radiation from the diagnostic source assembly. The leakage radiation from the diagnostic source assembly measured at a distance of 1 meter in any direction from the source shall not exceed 100 milliroentgens (25.8 μC/kg) in one hour when the X-ray tube is operated at its leakage technique factors. Compliance shall be determined by measurements averaged over an area of 100 square centimeters with no linear dimension greater than 20 centimeters.

This requires a radiation physicist or approved service provider to investigate. It should be done as part of the continuing survey check of your radiology equipment. This section also contains with various other physics-related items that the dental personnel would not check themselves, but that a radiation physicist or approved service provider would check. These are not listed here.

> *f.* Multiple tubes. Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes which have been selected shall be clearly indicated prior to initiation of the exposure. This indication shall be both on the X-ray control panel and at or near the tube housing assembly which has been selected.

Once again this seems straightforward. The operator must check that this is the case. In other words, if the indicator light is burned out, this needs to be replaced to be in compliance.

> *g.* Mechanical support of tube head. The tube housing assembly supports shall be adjusted such that the tube housing assembly will remain stable during an exposure unless tube housing movement is a designed function of the X-ray system.

> Dental intraoral x-ray tube heads are supported by an arm that has springs and counterbalances. They can, and usually do, go out of equilibrium eventually. They can be easily adjusted by your service technician. The last part, which states "unless tube housing movement is a designed function of the X-ray system" refers to units such as pantomographic (panoramic) units where the tube housing moves around the patient during the exposure, or other tomographic units.

> Ch 41, p.16a Public Health[641] IAC 4/2/03
> **41.1(6)** *Radiographic systems other than fluoroscopic, dental intraoral, veterinary, or computed tomography X-ray systems.*
> *a.* Beam limitation. The useful beam shall be limited to the area of clinical interest. This shall be considered met if a positive beam-limiting device meeting manufacturer's specifications and the requirements of 41.1(6)*"h"*(2) have been properly used or if evidence of collimation is shown on at least three sides or three corners of the film (for example, projections from the shutters of the collimator, cone cutting at the corners, or borders at the film's edge.)

This pertains to dental practices only if x-ray units other than intraoral units (standard dental x-ray units) are in use. My reading of this is that it does include pantomographic (panoramic) units. These units are usually extremely well collimated and limited to the area of clinical interest. It may also apply to fixed cephalometric units.

The rest of **41.1(6)** does not apply to most dental situations, and thus I shall not deal with it in detail here. If any dentist does have purpose units that are used for specific purposes such as cephalometric radiographs, or facial bone investigations, I would recommend that she or he look at this section, or insure that their radiation physicist or approved service provider ensures compliance.

And this is another good place to end. Next time we shall start by looking at requirements for Intraoral dental radiographic systems.

Once again I should like to thank Charlene Craig from the Iowa Department of Public Health for reviewing the manuscript to ensure that I got it right.