Liabilities and Risks of Using Cone beam Computed Tomography

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INTRODUCTION

As technology such as cone beam computed tomography (CBCT) advances apace in dentistry, clinicians who embrace it should understand the potential liabilities and risks associated with the technology. However, the decision to use or not to use new technologies within a practice or on an individual patient should be based on clinical considerations, not on legal ones. Nevertheless, once a decision has been made, clinicians would be well advised to understand the legal implications of their decision and how they use or do not use the new technology. Although the preceding statements apply to all aspects of dentistry, in this article the focus is on CBCT. The reader should bear in mind that in the United States, laws vary from state to state. Thus, a dentist should always seek the advice of an attorney or malpractice carrier to ascertain the law in his or her own state.

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KEY POINTS

- The use of cone beam computed tomography (CBCT) carries with it medicolegal risks of which the practitioner should be aware. These include licensing and malpractice liability concerns.
- A practitioner who intends to take and/or use CBCT scans should seek advice from his malpractice carrier before doing so.
- All scans should be read by someone competent to interpret them.
- Using the services of an out-of-state radiologist to read scans poses its own set of risks.
- Consultation with a malpractice carrier and dental boards is advisable in this situation.

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TO SCAN OR NOT TO SCAN: THE STANDARD OF CARE

Unlike drugs that must be approved by the Food and Drug Administration for specific indications before they can be put on the market,\(^1\) the same is not true of devices such as CBCT machines. Although all radiographic equipment has to meet federal and state guidelines, it is generally not approved for a particular purpose or indication. For new techniques and technologies for which there are no “standards of care” or long-established or accepted guidelines for their appropriate use, the issue of when and how to use them can be quite problematic for clinicians. A standard of care can be mandated only by a legislature, a court, and a dental board. It is rare, although not unheard of, for the first two to do so. For a case in which a court mandated a standard of care for eye examinations, see Helling v Carey.\(^2\)

Dental boards may create a standard of care through their regulations. For example, the Massachusetts Board of Registration in Dentistry specifies what the patient record shall contain.\(^3\) Such a regulation may set a standard of care. There is no private group or association, no matter how esteemed, that is recognized as having the legal authority to establish the standard of care. Neither is there any group that has the authority to mandate a formal process by which a new procedure becomes the standard of care. It is almost universally true that the standard of care is determined by what clinicians actually do in practice. By way of example, in Massachusetts the standard of care is determined by “the degree of care and skill of the average qualified practitioner.”\(^4\) In Washington State, the standard is determined by “a reasonably prudent practitioner.”\(^5\) It is thus up to the profession acting through individual practitioners to decide on the appropriate use of the technology. Professional groups, including specialty organizations, do, however, issue “guidelines for use” or “position papers” on new technologies to help clinicians understand accepted applications, although these do not have the force of law.

In practice, the use of CBCT may be driven in part by vendors of the equipment, who have a pecuniary interest in their sale and use. Although their interest is legitimate, it is not a legitimate interest for practitioners. At the present time, it can be stated that the use of CBCT is well accepted in implant planning (Fig. 1) and endodontics (Fig. 2), for each of which a position paper exists.\(^6,7\) The use of CBCT is also well accepted to evaluate impacted teeth. A patient with multiple impactions (Fig. 3) illustrates this application. CBCT’s use in the evaluation of complex orthodontic and orthognathic cases, such as patients with asymmetries and syndromes, is accepted.\(^8\) Indeed, medical CT was used in such patients long before CBCT became available. Parenthetically, it should be emphasized that to say that the use of CBCT is well accepted is not to imply that its use is mandatory in all or even most cases in any of the dental disciplines.

In the early stages of a new modality, in this case CBCT, a reasonable starting point for a clinician trying to decide when a scan is indicated would be to follow position statements that are endorsed by professional organizations, as well as to ascertain what other dentists in practice are doing. The latter can be done by asking colleagues, by attending conferences, and by reading reputable journals. Unfortunately, in the American system of jurisprudence, a practitioner is far more likely to be sued for not using technology as opposed to being sued for using it. Thus, the inclination to use new technologies, including CBCT, is driven in part by the fear of malpractice.\(^9\)

Another indication that a procedure has become clinically accepted is when third-party payers decide to cover the cost of such care. In medicine, Medicare and Medicaid usually lead the way, with private payers often following their leads on whether to cover a procedure.\(^10,11\) Decisions by third parties, governmental or private,
are not the final word on whether a procedure is clinically accepted or constitutes the
standard of care; that is decided by what the average qualified practitioner does. How-
ever, a decision to pay is more meaningful than a decision not to cover a procedure, as
the motivation for the latter may be primarily a cost-containment measure. In dentistry,
where the use of the word insurance is really misleading, a decision not to cover a
procedure commonly involves primarily or exclusively financial considerations for third
party payers. Thus, in dentistry, the decision to cover a procedure is much more sig-
nificant than a decision to deny coverage.

For a comprehensive discussion on how new technologies and procedures may
become the standard of care, see the article by Friedland.

TECHNICAL PARAMETERS

Proper technical parameters are important to obtain a clinically acceptable scan.
Improper technical parameters also may lead to liability. These include selecting a
low-resolution setting (0.3 mm voxel or higher) for a task requiring high resolution
(0.2 mm voxel and lower) and selecting an inappropriate field of view (FOV). The reader
should be aware that when it comes to resolution, a higher number means that the resolution is worse, and vice versa. For example, a scan done at a resolution of 0.3 mm voxel has a higher resolution than a scan done at 0.4 mm voxel. Spatial resolution is expressed in line pairs/millimeters or voxel size. For practical purposes, it can be defined as the ability of an imaging modality to differentiate 2 objects, or

Fig. 2. (A) Apical lesion discovered on tooth #31 on acquiring volume for examining impacted tooth #32. This apical lesion was not appreciated on the 2D grayscale periapical radiograph. (B) Small furcation defect or possible lesion of endodontic origin from lateral canal of this tooth. (C) Inferior alveolar nerve (IAN) “painted” in software to reveal that apical lesion on tooth #31 may be irritating the nerve. Tooth #32 is also in contact with the IAN, which is important for presurgical planning information.
Low spatial resolution techniques will be unable to differentiate between 2 objects that are close together and may be unable to discern a small object, such as a fracture in a tooth. The FOV refers to the physical size of the anatomy that is covered by the exposure, usually selectable from about $37 \times 50$ mm (typically for a single endodontic procedure) up to as large as $20 \times 20$ cm (eg, an orthodontic or oral and maxillofacial surgery patient).

Owners and operators of CBCT equipment should be familiar with the technical parameters required for a specific examination. Unfortunately, many dentists who install a machine are not adequately trained to fully understand and take advantage of their machine’s capabilities. Common errors include a scan with an FOV that is too large or too small. A larger FOV than is necessary has at least 2 deleterious effects. It results in a less optimal image (the larger the FOV, the greater the scatter and the less detailed the image) and a greater patient dose. Although increased scatter and dose are not likely to result in liability, a wider FOV than is necessary does have medicolegal implications as far as interpretation of the image is concerned, an issue that is discussed later in this article. A too small FOV may preclude the ability to interpret the image as the fineness of detail that can be observed in an image.
correctly. Some machines also allow the operator to control or select the kilovoltage and milliamperage. Selecting too low a milliamperage setting may result in a poor scan by reducing the number of resultant x-ray photons available, resulting in a less than optimal scan, often with much soft tissue scatter, and thus poor image quality for interpretation. Too high a milliamperage setting will result in increased dose. Understanding these parameters is critical to producing the best diagnostic quality scan.

**Resolution**

When one is looking at very small structures, such as individual canals or fractures of teeth, it stands to reason that a high-resolution image is necessary. In a 2009 article, it was stated that for endodontics the minimally acceptable resolution should not exceed 200 μm (0.2 mm). With current machines capable of much higher resolutions, in the range of 0.07 mm and better, endodontic scans today should be done at or near the highest resolution possible. Should a practitioner do a scan for endodontic purposes at too low a resolution, the information being sought may not be depicted. Such a scan would be inadequate for the purpose for which it was taken and could result in liability for anything missed that would have been visible on a scan done with appropriate resolution. In addition to the resolution selected by the operator, the smaller the scan volume or FOV the better the resolution; thus, endodontic scans should be done with the smallest reasonable FOV.

**FOV**

An important consideration for a scan is what to include within the FOV. On the one hand, one wants to keep the FOV as small as possible, both to reduce patient x-ray dose and to improve spatial resolution in the images. On the other hand, the FOV should include a sufficient view of the anatomic area so that one acquires the necessary information. Examples of scans that are underinclusive and overinclusive are common. Fig. 4 is a sagittal slice of a scan that was done for the purpose of planning mandibular implants. Clearly, anything below the inferior cortex of the mandible and 2 to 3 mm superior to the occlusal plane is superfluous. The potential liability issue that arises is that the dentist is responsible for reading the entire scan. Thus, even though the maxilla and skull were not required in this case, once they are included in the scan, the dentist is responsible for pathology missed in either location.

Too small an FOV carries its own risk. This is seen most commonly in the maxilla. Fig. 5A shows a large FOV CBCT scan performed for maxillary implant planning purposes. The panoramic reconstruction shows a large mucous retention cyst in the right maxillary sinus. The diagnosis can be made from the dome-shaped superior aspect of the lesion. Blood, exudates, transudates, thickened mucosa, and other soft tissue in the sinus have a similar opacity on CBCT scans. Thus, one must rely on the shape and distribution of the lesions to differentiate between them. Importantly, when it comes to the shape, it is the superior aspect of the lesion (eg, dome-shaped, straight, meniscus) that is significant and that allows one to distinguish among the various conditions. It follows then that to be able to make this differentiation, one must image the entire sinus, up to the orbital floor, as lesions may fill the entire or almost the entire sinus. If a dentist takes a small FOV scan and sees pathology in the maxillary sinus, but is unable to visualize the superior border of the pathology, then the dentist is obligated to obtain a second scan that includes the entire sinus. This is necessary for 2 reasons. First, the clinician will be not be able to ascertain from the small FOV scan whether the pathology is impinging on the ostium or may do so after surgery such as a sinus augmentation. Second, the clinician will not be able to identify the nature of the pathology.
Fig. 5B shows a small FOV scan in a different patient from that in Fig. 5A. Assume that the same size mucous retention cyst was present in the patient on whom the small FOV scan was taken. From the images, it is readily evident that the superior aspect of the mucous retention cyst would not have been visible on the small FOV scan. In this case, one would have needed to take a second scan, this time a large FOV scan. For this reason, although small FOV scans are adequate when planning mandibular
implants, a larger FOV that encompasses the entire maxillary sinus is preferable in the maxilla.

This principle is based on the fact that sinus pathology is common even in asymptomatic patients. The symptoms of sinusitis may be “subclinical” and manifest only at the next insult, such as an allergen or common rhinovirus. The prevalence of pathologic findings on CBCT scans of asymptomatic patients has been reported to vary from 24.6% to 56.3%. Pette and colleagues reported sinus pathology in 61.95% of patients on whom a CBCT scan had been done for implant planning purposes, although Rege and colleagues reported findings in 68.2% of cases of asymptomatic patients. A large FOV does not imply that both sides should be included in a scan, as is seen in Fig. 5A. If surgery is going to be undertaken on only one side, and the CBCT machine allows for imaging only one side while including the entire sinus, then that is preferable.

It is generally true that dentists prefer small FOV scans because they believe that it is not unlike a periapical scan in size and scope and that they are therefore able to read it themselves. This, they believe, limits their liability by excluding anatomy that they are not comfortable interpreting. Although small FOV scans are preferable because they reduce patient dose and improve spatial resolution, the motivation for selecting a small FOV should not be to limit a dentist’s liability. Further, serious pathology may present even on small FOV scans. Fig. 6 shows a cropped axial image of a small FOV scan undertaken for endodontic purposes. The image raised the possibility of a malignant lesion, which was later confirmed on biopsy.

In summary, the anatomy covered by a CBCT scan should be dictated by the patient’s symptoms and the dentist’s findings on clinical examination, and the

![Fig. 6. This cropped axial image is of a small FOV scan undertaken for endodontic purposes. The large arrow points to the palatal cortex. There is destruction of the palatal cortex (small arrows). Together with other views (not shown) from this scan, the lesion was identified as being malignant. Biopsy showed it to be an osteogenic sarcoma.](image)
information needed to allow a proper diagnosis or treatment plan to be formulated. The FOV should not be selected in an attempt to avoid liability; that decision may actually increase the risk of liability.

INTERPRETING CBCT IMAGES

The interpretation of CBCT images remains one of the most vexing problems for practitioners who take their own scans, and potentially among their greatest sources of liability. After all, a missed malignancy is much more likely to result in liability with a big payout than almost anything else a dentist does. Although malignancies are rare compared with typical dental pathology, so that the risk of encountering one and not diagnosing it is small, if the risk does materialize, the consequences are great, most especially for the patient. The damage to the dentist’s reputation and especially his or her conscience, and not the financial penalty, may be the greatest casualty.

Among dental school faculty, especially among those who teach radiology, there is currently debate on whether to teach dental students to interpret CBCT scans and, if so, to what extent. Certainly, dentists who graduated before CBCT became widely used probably had minimal or no instruction on CBCT interpretation, so that they are ill equipped to interpret anything more than a small FOV scan and perhaps even then not all of those. For dentists who desire to improve their CBCT interpretive skills, there are courses available. One such course, “Basic User CBCT Course,” is offered by oral and maxillofacial radiologists with the American Dental Association (ADA) as the sponsoring organization. Information on this course, which is offered a few times each year, may be found on the Web site of the American Academy of Oral and Maxillofacial Radiology at aaomr.org under the “CE Courses” menu, as well as on the ADA Web site by typing “CBCT Course” in the search function field.

Dentists who take their own scans are responsible for reading them. This does not mean that either ethically or legally the dentist has to personally read them, only that he or she bears responsibility for making sure that they are read by a competent individual. This is no different from a dentist who refers out any other procedure that he or she is not competent to perform. Dentists who have their scans taken elsewhere are similarly responsible for having them read. In certain parts of the United States, the services of so-called imaging centers are used by many dentists.22 In these states, the imaging centers may be owned and operated by nondentists and even by nonmedically trained radiologic technicians. In California, for example, so-called limited permits are issued to nondentists who have training and have passed an examination in the taking of dental images, including CBCT scans.23 Although well trained in the technical art of taking high-quality images, these otherwise lay individuals are obviously unable to interpret them. In this case, referring dentists have 3 courses of action open to them:

1. Interpret the images themselves.
2. Refer to a radiologist to read them.
3. Use a scan center offering a “reading service” by a radiologist to read the scan.

A dentist who engages his or her own radiologist has more control over ensuring that the radiologist’s work meets the standard of care for that specialty. A dentist who relies on an imaging center to engage a radiologist to read scans may not know the radiologist’s qualifications. The latter situation could raise liability issues based on the legal concept of negligent referral.24,25 Although lawsuits brought on the basis of this concept are rare, they do exist and clinicians should be familiar
with the risk, albeit a small one. To be held liable, a clinician “must know or have reason to know that the specialist is incompetent.”\textsuperscript{24} This means that the law does not impose an affirmative duty on the clinician to take steps to ascertain the specialist’s competence. Only if the clinician in fact knows or should know that the specialist is incompetent may the dentist be held liable. In the situation in which the dentist relies on an imaging center, especially one owned by a layperson, to select a reading radiologist, things may be a little grayer. After all, is it reasonable for a dentist to rely on a lay individual to select a competent practitioner, in this case a radiologist? This is all the more true when one considers the issue in the context of licensing as well, a matter discussed in the section “The reading of scans over the Web,” later in this article.

If a dentist owns and/or operates a CBCT machine and takes a scan for a patient other than his or her own, the question arises whether the dentist taking the scan is responsible for reading it or whether it is the responsibility of the referring dentist. In practice, there are medical and dental practices and facilities, including hospital radiology departments, that take dental scans, most commonly for implant planning purposes. Many of these facilities do not read the scans, but instead have a disclaimer. An example of such a disclaimer is one from the Massachusetts General Hospital, which states: “These images were NOT reviewed by a Mass General radiologist for diagnostic purposes, and NO radiological review, report, or professional bill was generated. These images are intended for review by dental care professionals to aid in dental implant or extraction surgical planning. Mass General Imaging makes no diagnostic claims regarding these images. If there are concerns regarding pathology and a radiological consult is desired, please contact …” As long as it is made clear to the referring dentist, and preferably the patient as well, that only the technical service of taking the scan is being offered, that should preclude any liability on the part of the dentist taking the scan. However, the dentist who \textit{ordered} the scan will be responsible for reading it or having it read by a competent practitioner.

Although a disclaimer is likely to insulate from liability an entity or individual who is just taking the scan, in practice many and perhaps most such entities or individuals require the ordering dentist to obtain a reading from them. They do so to avoid any possibility of being sued, based on the adage that “the aim is not to win a lawsuit, but to prevent one.”

\textbf{WHAT NEEDS TO BE READ}

Whoever reads the scan is responsible for reading \textit{all} of it, not only the anatomic region for which the scan was taken. This standard is no different from that for any other image taken. A dentist cannot read only part of a cephalogram or panoramic image. For example, in orthodontics, a dentist is responsible not only for that part of the image pertinent to an orthodontic analysis, but for anything that appears anywhere on the image.\textsuperscript{26,27} An editorial in the orthodontic literature bears testimony to the fact that this is the accepted standard within the profession.\textsuperscript{28}

\textbf{THE READING OF SCANS OVER THE WEB}

With current technology, it is easy for a scan to be read anywhere that high-speed Internet access is available. Unfortunately, although technology has advanced to make this possible, dental licensing laws are strewn with pitfalls of which the dentist should be aware. Because there is no national license in either dentistry or medicine, practitioners are licensed by state. For licensing purposes, the primary considerations
are where the radiologist who is reading the scan is located and where he or she needs to be and is licensed.

For most of history it was possible for a practitioner to examine a patient only if both were present at the same place and time. This gave rise to the rule that “It is the location of the patient that defines where the care has been delivered and the jurisdiction of applicable regulations.”29 Although the issue has become more pressing with the advent of the Internet, questions of licensing arose before that. For example, a radiograph could be sent by mail to an out-of-state radiologist for interpretation. A biopsy specimen could be sent out of state for processing and to be read by a pathologist. However, the process was cumbersome and slow, and incidence of this was so low that boards of registration in dentistry and medicine did not address the issue. Given the ease with which images today can be sent over the Internet and be read anywhere, it has become commonplace for practitioners, either themselves or through reliance on imaging centers, to have scans read by radiologists who do not reside in the same state as the dentist. Thus, the question arises “where must the radiologist be licensed, in the state where the dentist practices, in the state where the radiologist practices, or even in both?” Because the purpose of licensing laws is to protect the health and welfare of the citizens of a state,30 the most logical conclusion is that a radiologist reading scans for a dentist located in state A needs to be licensed in state A and only in state A. Even if the radiologist is located in state B, he or she should not be required to be licensed there if he or she is not reading scans for dentists located in state B; after all, state B has no interest in protecting its citizens from the radiologist if he or she is not affecting their care. Although some medical boards have considered the matter and even issued guidelines or regulations,31 few dental boards, if any, have provided explicit guidelines concerning this matter. Further, the constitutional standard that a state has to meet to justify requiring licensure is extremely low,32 and it is almost certain that in the preceding example state B would be well within its right to require the radiologist to be licensed there. If the radiologist fails to obtain a license when a state has deemed it necessary to do so, the radiologist could be charged with practicing without a license. Referral to a radiologist who is not licensed in the state in which the dentist is located may make the dentist vulnerable to disciplinary action by the dental board and may also make the dentist guilty of the crime of aiding and abetting the unlicensed practice of dentistry.33 Thus, a dentist who has scans read by an out-of-state radiologist should confirm that the radiologist is appropriately licensed. Both the board of the state in which the dentist is located, as well as the state in which the radiologist is located should be consulted.

The issue of licensing ties-in with potential liability for negligent referral. If a dentist has scans read by a radiologist not licensed in the dentist’s state, this may increase the chances of a suit based on negligent referral. This is true whether the dentist contracts directly with the radiologist or uses the radiologist’s services through an imaging center. Because of the rarity of negligent referral lawsuits, the possibility of this occurring should not be overemphasized. However, the chances may be higher under the circumstances discussed here. It behooves dentists to know the credentials of the radiologists they use.

There is one very practical consideration that a dentist who uses the services of an out-of-state radiologist should bear in mind. Assume that the radiologist makes a misdiagnosis and that both the radiologist and the dentist are sued. Imagine the reaction of a jury to the plaintiff’s attorney’s question directed to the radiologist from state B, “are you licensed to practice in state A (where the dentist practices and the patient lives)?” and the radiologist responds “no.” That may poison the well enough for the jury to find against the dentist, other evidence notwithstanding.
To overcome the limitations imposed by licensing requirements, dentists have sought to couch the referral of scans to be read as merely the seeking of a second opinion. The second opinion is a long-used and well-respected tool in the health care professions. Indeed, some states explicitly recognize it and do not require the out-of-state practitioner to be licensed when giving a second opinion. Massachusetts recognizes it by statute, stating that a Massachusetts license is not required by “a physician or surgeon resident in another state who is a legal practitioner therein, when in actual consultation with a legal practitioner of the commonwealth” he provides an opinion. Note that the “outside” physician must actually consult with the in-state physician. The licensing exception also applies only when such consultation is made on a one-time or occasional basis. If a physician routinely consults a physician who is not licensed in Massachusetts, the licensing exception does not apply. Hence, the “second opinion” argument will not fly when every scan or most scans are sent out to be read, and when the dentist has not read the scan and made at least an initial diagnosis.

ATTEMPTS TO LIMIT LIABILITY

Attempts to limit malpractice liability are not restricted to CBCT, nor are they new, but they have gained new traction since the introduction of CBCT, and especially as dentists purchased machines and started taking their own scans rather than referring patients to radiology facilities. Dentists untrained in the interpretation of CBCT scans became concerned about liability in the event they misinterpreted a scan. One course of action that has been suggested is to ask a patient to sign a waiver of liability; that is, in effect to require a patient to give up the right to sue for negligence. Waivers of liability have no legal effect and courts will ignore them. Most jurisdictions that have considered the matter have held that physicians and hospitals cannot require patients to waive their rights to recover damages for negligence.

Because requiring a patient to waive his or her right to sue will not pass muster, practitioners have considered another tack. This one involves letting the patient choose whether to have the scan read. The thinking here is that by leaving the decision up to the patient, there should be no liability on the part of the dentist for any misdiagnosis. This tactic also will not work. The choices offered to patients to allow them to make informed decisions are limited by the bounds of the accepted standard of care. For example, no dentist would permit a patient to agree to a restoration on a tooth that clearly requires endodontic therapy first, because such treatment would be below the standard of care. Similarly, not having a CT scan read is below the standard of care.

Some health care practitioners and organizations have sought to use a contract to limit at least the noneconomic damages that a patient may recover. It is unclear whether such private agreements will be enforced by courts. Of course, if a state legislature has enacted such limits, then that law will govern any malpractice award. Florida is an example of a state that has capped noneconomic damages. Whether a state law mandating limits on noneconomic damages will withstand scrutiny by a court depends in large part on a state’s constitution and it is likely that such a law will ultimately be challenged in a state’s highest court.

Although it does not limit the amount of damages that a patient may collect, arbitration allows for much quicker and simpler resolution of a case. The Federal Arbitration Act encourages the settlement of disputes by arbitration and preempts state law. A dentist could thus include a compulsory arbitration clause in a contract with a patient. It is highly likely that a court will enforce such an arbitration clause, provided it is not unreasonable.
MALPRACTICE INSURANCE

In addition to making sure that the radiologist is appropriately licensed, the dentist should inquire about the radiologist’s malpractice coverage. This applies not only to the dollar amount of coverage, but also to whether there are any limitations to coverage. For example, is there a clause that limits coverage only to where the radiologist is lawfully licensed to practice? If so, and the radiologist is reading scans for a dentist in state A, but is not licensed there, then the insurance carrier may deny coverage. Thus, in addition to checking with state licensing boards on where licensure is required, the dentist should check with the radiologist’s malpractice carrier on any limitations in coverage, or ask the radiologist to provide verifiable information. If, in the case of a suit, a radiologist’s malpractice carrier denies coverage, this could conceivably leave the dentist being the only “deep pocket,” with the patient then suing the dentist. This does not mean that the patient will prevail in a suit against the dentist if the dentist was not otherwise negligent but, to quote the adage again, “the aim is not to win a lawsuit, but to prevent one." All the extra work of checking into a radiologist’s licensure requirements and malpractice coverage may seem overly burdensome, but it is the price we pay for a fractured system of licensure, there being no national license in the United States.

If a dentist owns a CBCT machine and takes scans not only for his or her own patients, but also for those referred from outside, the dentist may find that in the latter situation he or she lacks malpractice coverage in the event of a lawsuit. Some malpractice carriers have explicit limitations and will defend a dentist for CBCT-related diagnostic issues only if the suit is brought by one of the dentist’s own patients. If a patient who was referred from outside solely for a CBCT scan and brings a lawsuit for a misdiagnosis, then malpractice coverage is denied. A dentist may be able to purchase a rider from the malpractice carrier to cover patients of this type. In practice, denial of malpractice coverage usually means that a patient (plaintiff) is less likely to sue, as there is no insurance money to go after. However, denial of coverage is not a bar to a patient bringing a suit; the patient may well decide that the dentist has sufficient personal assets from which to pay a judgment such that the patient proceeds with a suit.

SUMMARY

This article addresses the principal medicolegal issues facing owners and users of CBCT today. Dentists who operate CBCT units would be well advised to speak with their malpractice carrier before purchasing a machine, as coverage may differ depending on circumstances. Dentists using an out-of-state radiologist to read scans should verify that the radiologist has the appropriate licenses as well as malpractice coverage. Any contract that a dentist wishes to use between the dentist and patients should be vetted by an attorney and preferably by the malpractice carrier as well.

REFERENCES

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32. Fogland v Board of Registration in Medicine 357 Mass 624259 NE2d 780 (1970).
33. Texas Occupations Code, Title 3, Subtitle D, Chapter 251; California Business and Professions Code §§2264.
34. Massachusetts General Laws Chapter 112: Section 7.
38. 9 U.S.C. § 1 et seq.