A NOTE FROM THE DOCTORS

The addition of paperless charts, digital radiography and a 3D imaging machine to our practice over the last 5 years has enhanced the care we are able to provide for patients. Adjusting to new products (& procedures) was not without some tribulation, but we have learned a lot about our ability to adapt and the endless capabilities of these technologies. We are proud of how far we’ve come embracing the “signs of the times”! We are continually learning and growing about the world of dental technology and communication. We have dedicated this issue of ‘Probing The Practice’ to sharing with you what we’ve learned. Have a safe and fun summer!

Lisa A. Palermo-Edwards • David A. Cacchillo • James M. Palermo

DON’T LET ENCRYPTION CRIPPLE YOU

Most would agree that computers and information technology have simplified and streamlined our lives and our practices in a variety of ways. Patient information, as well as record sharing, is just a ‘click’ away. With this increased reliance on technology also comes increased risk and responsibility. Staying abreast of emerging technologies and guidelines to maintain compliance in using them can be a daunting task.

HIPAA Security Rules state that adequate security safeguards must be in place for sharing Personal Health Information (PHI) such as patient images, radiographs or identifying information (name, date of birth, insurance ID, SS #, etc.).

“If encryption is reasonable and appropriate to protect patient information that you’re sending electronically, you must encrypt”.

At this time, there is no existing alternate safeguard to encrypting PHI shared via email therefore the only option is to not use email if you do not want to encrypt. Encryption may add additional steps in some cases for the recipient to open your email, however, they are minor when considering the potential emotional or financial ramifications of a HIPPA security breach for your patient or your practice. (ada.org)

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Contact Jeremy: jfultz@3ctechs.com or 614.319.4681
Three-dimensional (3D) imaging has a wide variety of uses in the dental field. This type of imaging can enhance treatment planning many aspects of dentistry but this article will focus on its use in periodontics, orthodontics, and endodontics. While two-dimensional (2D) radiographs are used daily to provide invaluable information for clinicians, they can be distorted due to overlap of surrounding structures or cause images to be superimposed and magnified; these complications can be eliminated by using 3D imaging because overlap and magnification are nonexistent (1).

**3D use in Periodontics & Dental Implants:** 3D imaging provides vital information that can be used to enhance treatment planning and help the clinician determine the prognosis of various proposed treatments (2). While bone loss is detected routinely with 2D imaging, it can be seen in a more detailed manner with 3D imaging (3). When considering dental implant placement, 3D imaging can provide the clinician the ability to virtually place implants prior to any surgical procedure. These images display numerous considerations for implant placement that include but are not limited to, density and quality of the bone, positions of maxillary sinus’ and mandibular nerves, as well as surrounding structures (4). 3D images are nearly equal to measurements taken in surgical procedures which could potentially reduce the need for additional surgeries (5).

**3D use in Endodontics:** In the field of endodontics 3D imaging has a variety of clinical implications some of which include: detection of vertical root fractures, presence of accessory canals, root resorption, and periapical lesions that cannot be seen on 2D images. Compared to 2D images, 3D images detect more periapical lesions (6). Due to its higher sensitivity, 3D images are better at detecting vertical root fractures when compared to its 2D counterpart (7). This type of imaging can provide vital information for patients who are unable to localize or accurately communicate where their signs and symptoms are arising from (8).

**3D use in Orthodontics:** 3D imaging can be used to evaluate skeletal discrepancies, impacted teeth, eruption patterns, TMJ disorders, and aid in treatment planning for orthognathic surgery (8, 9). When evaluating impacted teeth, 3D images provide vital information on tooth position and possible root resorption in regards to surrounding teeth (10). When evaluating patients, TMJ degenerative disorders can also be detected on 3D images (9). 3D imaging can provide essential diagnostic information to streamline and clarify many aspects of dentistry. Although 3D imaging has many beneficial outcomes for the patient and the clinician, the benefits of exposing the patient must outweigh the potential risks. Due to its higher level of ionizing radiation, the clinician must consider the patients’ medical and dental history prior to administering the image (4). It is prudent to obtain an informed consent prior to the exposure of a 3D image.

Article sources can be found online at www.pecdds.com/ce-courses/newsletter/
A. Traditional 2D PA does not indicate if impacted tooth is positioned labial or palatal.
B. The 3D image clearly shows tooth is encased in palatal bone.
C. 3D technology used for nerve tracking & virtual implant placement
D. 3D used for evaluation of buccal-lingual ridge width

Questions

1. According to the article, which of the following can cause a 2D image to become distorted?
   A) Overlap of surrounding structures  C) Sensor position
   B) Superimposing and magnification  D) A and B

2. True or False: 3D imaging can be used to determine position of maxillary sinus’ and mandibular nerves.

3. Which type of imaging is best to detect a vertical root fracture?
   A) Bitewing film  C) 3D film
   B) Periapical film  D) Panoramic film

4. 3D imaging in orthodontics can be used to evaluate the following:
   A) Skeletal discrepancies  C) TMJ disorders
   B) Impacted teeth  D) All of the above

5. Which of the following images have a higher level of ionizing radiation?
   A) 2D  C) Both have the same amount
   B) 3D  of ionizing radiation

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COMMUNITY SUPPORT

Miles of Smiles Gala

Dave & Renee Cacchillo, Lisa Palermo-Edwards & Mark Tucker attending The Gala to support the cleft lip/palate repair foundation.

ARE YOU AT RISK?

Looking at how a data breach could affect your practice or your patients can provide valuable insights as to how safe your HIPAA practices are.

• Do your HIPAA Privacy & Security Officers understand their roles?
• Did you update your Notice of Privacy Practices & Business Associate Agreements before the 9/2013 deadline?
• Have you completed the required annual Security Risk Assessments?

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-Dr. Lisa Palermo-Edwards

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UPCOMING EVENTS

2017 Dental Implant Mini Residency Course: Dates Coming Soon!

Periodontal Seminar for the Dental Hygienist: 9/22/16 & 4/20/2017

IMPACT: 10/13/16  2017 dates coming soon!

FREE CE CREDIT INSIDE!

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3. PEC will e-mail your FREE, 1 HOUR CE CERTIFICATE to the office address.

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OFFICE ANNOUNCEMENTS

Jessie Mott (Office Manager) has accepted a full-time position in Dental Sales.

Becky Henderson (RDH & Practice Relations Coordinator) has accepted a full-time position as an Assistant Professor, in The College of Dentistry at Ohio State.

Amy Shelstad (Office Associate) has accepted the position of Office Manager here at PEC. We are excited to have Amy’s 18 years of dental practice experience guide her new role!

Congratulations to Jessie, Becky & Amy on their exciting new positions!

Congrats! Healing Abutment Recycling Program Lunch Winner:
Violet Family Dental, Dr. Donna Noll & Associates Thank You!

OFFICE APPRECIATION NIGHT
WITH THE COLUMBUS CLIPPERS

Our staff enjoyed a night out to socialize and connect with other office staff we don’t often see in person! We thank you for your confidence in us!

COMMUNITY SUPPORT—PRESENTING SPONSOR

NC4K Reindeer Run, Sat. Dec 3
• 8:00am at Huber Park, Reynoldsburg.
• Help support families of kids and teens with cancer!
• Online registration opens Sept. 1 at nc4k.org

JOIN US!