

**Summary of Comments from the September 27, 2024 Stakeholder Meeting**  
**Regarding Use of Lead Aprons During Dental X-rays**

1. John Chaconas, DDS – he agrees with the updated recommendations to not require lead shielding during dental radiograph exposure.
2. Karla Clanton, RDH – it is proven that dental x-rays give off minimal if any radiation, and a person gets more exposure from radon in the ground or microwave. Maximum doses are in MRIs, mammograms, CAT scans, etc. Someone needs to research the dosage and exposures.
3. Brent Cornelius, DDS – it is important to have a unified message to patients. In light of the current research, he is in favor of removing the requirement that dental patients must wear lead aprons while exposed to x-rays.
4. Lori Fulk, DDS – she agrees that the board rules should be amended. Patients request a thyroid collar during panorex x-rays, and all that happens is that it obscures the view of the lower incisors as well as the mandibular symphysis. Thus, a new x-ray has to be taken anyway resulting in excess radiation.
5. Mark Stephenson, DDS – when the handheld x-ray units (Nomad) first became available, he was hesitant about any x-ray exposure that could happen to him or his assistant. He ordered and wore x-ray exposure badges for a year and sent them in for evaluation. The results were negative for any exposure. That was 15 years ago. He agrees with the ADA stance on their new policies regarding no need for lead aprons for dental x-rays if they are digital. He trusts that many research results were evaluated by the ADA and the decision was taken very seriously.
6. Rose Trigg – shielding should continue in use. People still believe that dental x-rays are harmful. If the board removes the lead apron requirement, it could lead to patients deciding to stop seeing their dentists.
7. Texas Academy of Pediatric Dentistry (TAPD) - pediatric dentists have been urged to keep radiation doses to a minimum and avoid all unnecessary exposure. This has been achieved, in part, by using patient protection devices such as aprons, collars and shields. Because medical and dental guidelines now recommend discontinuing the use of patient thyroid, gonadal and fetal shielding during x-rays, TAPD supports removing 22 TAC 113.2(c). TAPD believes that each dentist, in consultation with current guidelines, and with the patient and/or a parent/guardian, should determine if the use of a lead apron is in the best interest of the patient. Pediatric dentists should continue to use the “as low as reasonably achievable” principal when deciding if shielding is necessary for a patient. TAPD urges pediatric dentists to consult and educate patients and parents about these new guidelines and ultimately use their professional judgment in deciding whether the use of lead aprons is needed. TAPD does not, however, believe the mandate of use is necessary.

8. Texas Society of Periodontists (TSP) - the TSP board has reviewed the 2023 Recommendations from the American Academy of Oral and Maxillofacial Radiology position paper regarding patient contact shielding during dentomaxillofacial imaging. TSP supports the removing the lead shielding standard of care requirement from Rules 108.42 and 113.2. TSP believes the proposed rule changes preserve the value of maintaining the TSBDE's mission to prioritize the health, safety, and superior quality dental care for the public.
9. Jenna Wallis, RDH, CDA – she supports the continued use of lead aprons during radiographic procedures. While studies, such as the one produced by the ADA, suggest that radiation exposure has minimal impact on reproductive biological tissues, I believe it is essential to maintain the use of lead aprons to safeguard the public. Current regulations permit unregistered assistants to operate x-ray equipment with minimal training for up to a year, without requiring formal courses in radiation safety and infection control. This increases the likelihood of retakes, which must be considered when protecting the public from excessive exposure. Since the training and education requirements for these assistants are not held to the same standards as dental hygienists or dentists, it is critical to continue using lead aprons as an additional protective measure to ensure high standards of care.
10. Deborah Testerman - if the board decides to implement no lead aprons, will the board implement and enforce the use of the rectangular collimation as recommended in the article. If so, will dentists be willing to retrofit and buy the inserts for the rectangular collimation.
11. Purnima Kumar, DDS, PhD, Chair of ADA Council on Scientific Affairs – lead aprons were initially used to protect against secondary or scattered radiation, which comes out of the x-ray device. Three things have changed: 1) improvement in devices themselves, went from circle to square devices, which reduced amount of scattered radiation, 2) digital radiology increased, and 3) claims that lead shielding prevents cancer or provides fetus protection – evidence isn't strong or non-existent to support these claims. The biggest change is digital radiology, and there is also the change of the device to enhance the primary beam and reduce scattered radiation. Thyroid shielding – the reason to use shield thyroids in the past was that a thyroid absorbs radiation and can lead to cancer/dysfunctions. However, the use of new devices show that radiation doesn't extend to the thyroid, radiation doses are now lower, and there is no evidence that radiation to unprotected thyroid leads to or increases cancer/dysfunction. Primary radiation is a separate issue, and different criteria is used. For instance, high quality images and lower doses, e.g., should you take 2 x-rays when 1 was obscured by a thyroid collar, or should you just take 1 good diagnostic quality x-ray. ADA's recommendations remain the same for both digital and analog x-rays, because again, the risk is so minimal. X-ray exposure badges – allows for minimal exposure to radiation.
12. Texas Dental Association (TDA) - recent clinical research, supported by the American Dental Association (ADA) and the American Academy of Oral and Maxillofacial Radiology (AAOMR), no longer endorses the routine use of lead aprons or thyroid

collars during dental x-rays. This recommendation applies to all patients, including vulnerable populations such as pregnant women. The recommendations apply to all forms of dental imaging, whether traditional or digital. The TSBDE's rules are outdated and do not align with the clinical guidelines, necessitating action from the TSBDE. The TSBDE's regulations must reflect this evolution in dental imaging practices to ensure patient safety and align with updated national standards. By amending its regulations to eliminate the mandatory use of lead aprons and thyroid collars during dental imaging, the TSBDE will not only promote better radiation safety practices but also ensure that Texas dentists are following the most up-to-date clinical guidelines. The ADA's updated 2024 guidelines state that modern digital x-ray technology renders additional shielding unnecessary with its improved precision and lower radiation output. This shift reflects advances in beam control, which sufficiently limits radiation exposure without needing protective aprons. Continuing to use lead aprons can compromise image quality, leading to potential retakes and ultimately increasing radiation exposure. Therefore, the use of such shielding contradicts the ALARA principle (As Low as Reasonably Achievable), a standard that emphasizes minimizing radiation exposure without sacrificing diagnostic quality. Although not the purpose of the TSBDE's Stakeholder Meeting, the TDA takes this opportunity to support transitioning from traditional to digital x-rays, a move backed by both the ADA and AAOMR. Digital imaging technologies not only reduce radiation exposure but also improve image clarity and diagnostic precision. Outdated protective measures, such as lead shielding, become unnecessary in this context, as these technologies offer sufficient radiation safety measures.