

Sterilization Systems

How to build your practice's central sterilization area

BY ANDREA COOK

Not only do orthodontic offices need to be very *familiar* with the most up to date recommendations and standards for infection prevention, including the *Centers for Disease Control and Prevention (CDC) Guidelines for Infection Control in Dental Health-Care Settings* (2003), they are expected to *implement* these recommendations into their practice. In 2016, the CDC published a new, easy to follow document, *Summary of Infection Prevention Practices in Dental Settings*. This summary is a companion to the 2003 Guidelines and provides dental healthcare providers with practical guidance on how to carry this out. It includes infection prevention checklists for dental settings and educates on relevant recommendations and elements published by the CDC since 2003.

Implementing these infection prevention best practices is all the more important after an increase in reported breaches. Patients and parents have heard about these reports in the media, and as a result they are walking into the practice better educated and more aware of what they should be looking for to protect themselves and/or their children. And if there is one critical area they are paying attention to, it is sterilization and disinfection of patient care items.

In my day-to-day work as an orthodontic

clinical consultant, I am seeing a tremendous increase in patient education. Wanting to understand how practitioners are responding to this, I reached out to Ed Lin, DDS, MS, a highly respected and internationally recognized orthodontist from Green Bay, Wis, who has been in practice for 18 years. I wanted to learn more about how he successfully implemented a system and process to help increase compliance with infection prevention recommendations as it relates to instrument processing. In talking to him, it became clear that the effort he put into planning and implementing proper protocols and systems has impacted the success of his offices. He has seen an increase in referrals related to these efforts, a trend that I am seeing in practices like his that make this same commitment. Being known for ensuring the highest standards when it comes to orthodontic treatment and patient safety is nothing but a boon for practice growth.

Andrea Cook: When it comes to providing optimal safety and infection prevention in your practice, what is the key component to this?

Ed Lin, DDS, MS: Systems, Systems, Systems... Anyone who knows me knows that I am a firm believer in them. Making sure the right systems are in place in



Wearing heavy-duty utility gloves, Nancy Figgins, the Central Sterilization Coordinator in the practice of Ed Lin, DDS, MS, wraps the clean and dry cassettes prior to sterilization. After the cassettes have been wrapped, Nancy loads them into the sterilizer. The cassettes are placed in a rack that allows adequate space for proper sterilization.

my practices is a high priority for me. Personally, I cannot function in a disorganized environment in any aspect of my life, and most importantly in our orthodontic practices, where we are entrusted with the care and welfare of both our patients and our employees. I believe it is imperative that we maintain the highest standards of patient and employee safety. We also want our patients and their families to see the safety and infection prevention protocols that are followed with every patient and be confident knowing that they are receiving the best care. Having an instrument management system and infection prevention plan in place is the only possible way that I know of to properly accomplish this goal. It is also essential that this plan be reviewed and updated on an annual basis with proper trainings in the practices following current Occupational Safety and Health Administration (OSHA) and CDC guidelines and protocols.



ANDREA COOK is a clinical consultant and trainer for premier orthodontic practices across the United States. She bases her training systems on practical knowledge gained through 20 years of chairside experience. Her years of experience include working in single, double, and multi doctor practices.



ED LIN, DDS, MS, is one of two partners at both Orthodontic Specialists of Green Bay, Wis, and Apple Creek Orthodontics of Appleton, Wis. Lin received both his dental and orthodontic degrees from Northwestern University Dental School. He is an internationally recognized speaker, who has been published in a wide variety of dental journals and has lectured at several orthodontic residency programs around the world.

Management

Cook: With compliance in mind, tell me about the process of how you designed and planned the layout of your central sterilization area.

Lin: I have three orthodontic practices, each built as new construction projects. As a result, we had the luxury of being able to create our customized instrument management system and design our central sterilization areas in each of our practices. We worked closely with our dealer equipment consultant as well as a local OSHA and CDC consultant to ensure that we were following the most up to date OSHA and CDC standards. It is very important to work with specialists and consultants that are knowledgeable in the orthodontic specialty. The differences in the types and number of instruments used in our busy offices make it necessary to address these issues when developing and implementing an instrument reprocessing system.

Cook: What should an established practice that can't rebuild from the ground up do to implement a central sterilization area?

Lin: Even if an office isn't built from the ground up, the layout of any sterilization area should flow from a dirty/contaminated section on one end, to cleaning, preparation and packaging, sterilization, and finally sterile storage. There should be adequate separation between dirty and clean.

Cook: Walk me through the factors you considered when setting up your central sterilization area?

Lin: In order to create a central sterilization area that would allow us to optimize efficiency and safety with an instrument management system, we had to take four factors into consideration.

1. How many patients would be seen on the busiest of clinical days and in what time period?
2. What type and how many clinical instruments and cassettes would be needed to handle the patient workload?
3. What type and how many handpieces are needed for the clinic?
4. What type of sterilization equipment is required to handle the amount of cassettes and individual instruments to meet the infection prevention standards of the OSHA and CDC?

These four factors determined the total cost of implementation. As we all know,

being conscious of our operational overhead expenses is important. However, in my opinion, the central sterilization area and instrument management system is not an area to try and cut corners in order to reduce costs. With the high number of patients we see in a day, we have a tremendous number of semicritical instruments that must be properly cleaned and sterilized after use. This area of any practice is an important investment for the safety, protection, and welfare of our patients and employees.

Cook: What type of sterilizers did you choose for your practices?

Lin: Steam sterilization is our method of choice. We use steam autoclaves for our cassettes and STATIMs for miscellaneous/specialized instruments. We chose steam sterilization for three reasons. First, the instructions for use of most newer orthodontic instruments reference steam sterilization parameters. Second, steam is faster than dry heat sterilization. And third, processing instruments in cassettes is an approved method of sterilization for the autoclaves. This ultimately improves clinical efficiency and allows for improved flow.

Cook: In addition to compliance, what have your practices gained since you implemented sterilization cassettes?

Lin: We have found four major benefits from using Hu-Friedy's Instrument Management System in our practice:

1. Significantly improved organization in the clinic. All of our instruments needed for a procedure are secured in the sterilization cassette. This means no more running around during a busy clinical day trying to find missing instruments. Our practices have two types of cassettes—Retie and Debond. The four doctors in our practices had to agree upon exactly what instruments we wanted in each type of procedure cassette. Since we each practice a little differently, we do have a few miscellaneous/specialized hand instruments that are all bagged and sterilized individually, and are kept in labeled drawers. We try to keep these types of miscellaneous/specialized hand instruments to a minimum as we prefer keeping our hand instruments in cassettes.
2. Clinical efficiency is another major benefit of having an instrument management system in place. The

time-savings achieved by not having to individually prepare trays with instruments has been significant. We've found the same benefit with cleanup at the clinical chair/side unit. Just place the instruments back into place in the cassette, close and lock the lid, and safely transport to the sterilization area. There, the entire cassette can be placed into the ultrasonic, rinsed, dried, wrapped, sterilized, and placed into storage. Time is money and this is especially true when you are on a set schedule in a busy clinic.

3. Clinical safety is critical for patients and employees. Having contaminated sharp instruments safely secured in cassettes from transportation throughout the sterilization process significantly reduces the risk for sharps injuries in the clinic. It also complies with OSHA and CDC guidelines.
4. Finally, handling and processing loose instruments can cause damage or even possible loss of instruments. As we all know, hand instruments are a significant investment for our practice. It is best to have your instruments organized and safely secured in cassettes to protect your investment.

Cook: Do you have any final thoughts to share for those orthodontists who are concerned with both compliance and sustaining state-of-the-art practice?

Lin: Purchasing an instrument management system and following a proper infection prevention plan is an investment and takes a considerable amount of planning for any practice. However, having it in place is imperative for organization, clinical efficiency, safety for employees and patients, and protection of your instruments and equipment. My recommendation is to invest in high quality products that will ultimately save your practice significant dollars over the long run.

As health professionals, we treat other health professionals and an increasing number of patients who are very aware of the steps we take to protect their health and safety. They observe how we do things in the clinic. This includes using sterilization cassettes and following proper infection prevention protocols. It is a nice feeling when we are complimented by our colleagues, peers, and patients for this, which has happened many times over the years. I personally do take great pride in this. **OP**