



# A Sterile Remodeling

## *Four lessons from renovation of sterilization room*

by Nancy Andrews, RDH, BS

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In a historic building from the 1930s Chicago World's Fair, University Dental Professionals recently added a wing to their dental office. The goal was to add operatories and an efficient instrument sterilization area to accommodate more patients and overcome inefficient workflow and cumbersome instrument-processing procedures. The remodeling incorporated new equipment, efficient space planning, and an instrument management system that dramatically improved upon the constraints of the old world architecture.

"We were highly motivated to perform these upgrades, based on our space limitations and growing needs," says Dr. Lou Graham. "The final outcome was well worth the investment. The lessons learned in following the proper sterilization processing procedures and working in an efficiently designed space have certainly proven to be invaluable to my practice."

### **The Motivation**

Before the renovation, it was clear that the sterilization room and the processing protocol were inefficient due to the constraints of space and a growing practice. The lab and sterilization area shared space, creating a bottleneck for instruments and the potential for cross contamination. The sterilization room did not have a clear flow from dirty to clean and the equipment was undersized, requiring the staff to continuously process instruments in overloaded ultrasonics and sterilizers.

In order to keep up with the demand of processing the instruments, employees often needed to work through their lunch hour and stay late, which was frustrating for them. Furthermore, Dr. Graham's instrument replacements costs were escalating due to instruments being damaged or broken when the ultrasonic was overloaded.

The office was consistently running behind in the sterilization area. To overcome this, sterilization protocols began to slip, much to the dismay of the staff. Wet bags and time-consuming searches for instruments were becoming increasingly common.

Unfortunately, these issues with instrument management cas-

caded to impact other areas of the practice. The staff noticed that the patient wait times were increasing. If the issues in the sterilization room were not addressed, the constant rushing to process instruments influenced the staff's stress level and quality of patient care.

**Lesson #1: Inefficient sterilization area design and sterilization processing techniques can negatively impact the entire dental practice.**

### The Process

Dr. Graham's practice has been in the same location for over 20 years. With a loyal patient base and great location, moving the office to gain more space was not desirable. Fortunately, additional space in the current building became available at the right time, so it was quickly decided to remodel and add a new wing. From start to finish, the project only took about three months to complete.

Teamwork had a lot to do with the speedy completion. The staff at University Dental Professionals worked closely with their dental dealer team to optimize the space and workflow efficiencies with the right design layout and instrument processing equipment.

One addition to their instrument processing equipment that significantly impacted their practice was the integration of sterilization cassettes. Sterilization cassettes standardized their procedural set-ups. This standardization cut back on missing instruments and enabled anyone, even new or temporary workers, to quickly and correctly set up for every procedure. In addition, the stainless steel Hu-Friedy Instrument Management



System (IMS) cassettes protected the instruments and essentially eliminated instruments getting damaged or lost during instrument processing or transportation to and from the operatory. The office found that by creating standardized set-ups and using the cassette systems, they saved an average of five minutes per procedure, which has allowed the staff to spend more time with patients.

Another addition that also positively impacted the practice was upgrading their sterilization equipment to include a new large sterilizer. By doing this, they eliminated backlog and the "wet pack" problem that the office had been experiencing. The new sterilizer optimizes drying by easily accommodating the cassette sizes, having a special rack that is designed for optimal drying, and utilizing vacuum technology. Together, the large sterilizer and IMS cassettes help the office process their instruments

faster and more efficiently, allowing the staff to spend more time doing value-added activities.

The staff quickly learned that they can be more efficient by designing the sterilization area in the center of the office vs. having it located at the back of the office — cutting down on the time to move between the operatory and the sterilization room. The new layout of the sterilization area also provided enough space to adequately separate dirty and clean processing stations and avoid cross contamination.

The office learned from working with their dealer representative that most offices see a 25% increase in production when they redesign their office. But more important to Dr. Graham's team is that they now have a space that helps them enjoy work while reducing stress, due to improved organization and more efficient technology.

**Lesson #2: An efficient and well-designed sterilization space leads to a more productive and happy staff.**

**The Outcome**

The bottom line is that Dr. Graham’s new space helped avoid the extra costs and frustrations of inefficient instrument processing. But more importantly, the staff is now able to focus on excellent patient care.

With an emphasis on precision dentistry and using the best technology optimally, the practice has invested in equipment that has built-in safeguards, so they know that patient and employee safety is ensured. The new space design, IMS cassettes, and larger sterilizer gave them all confidence in their asepsis procedures, while also increasing productivity and saving time and money.

“For practices considering enhancements or remodeling, I would highly recommend seriously considering improving your sterilization area,” says Dr. Graham. “Your office can reap huge benefits from redesigning an inefficient sterilization area to one that is efficient and systematic.”

**Lesson #3: Better organization, efficient use of space, and today’s sterilization technology make for a safer and more cost-effective workplace.**

**The Benefits**

As an infection control consultant, I saw that Dr. Graham’s practice had clearly outgrown his old office space, which was not designed for efficiency or optimal infection control. The sterilization remodeling now offers these significant benefits:

- The office design reduces the potential for cross-contamination by separating the laboratory from the sterilization activities.
- The instruments are processed in an orderly, logical sequence from contaminated to clean to sterile.
- The instruments are now organized in systematic and professional cassettes (Hu-Friedy Instrument Management Systems) grouped by procedure type. This increases efficiency, makes tasks easier and safer, and takes up less space.
- The cassettes allow anyone, even new or temporary workers unfamiliar with Dr. Graham’s instrument preferences, to quickly and correctly set up for every procedure.
- IMS cassette systems have saved the office five minutes per procedure, freeing up the staff to spend more time



with patients, and allowing everyone to get out of the office on time.

- Sterilization technology improves efficiency and effectiveness of instrument processing.

**Lesson #4: An investment in today’s sterilization space and technology provides tremendous benefits to every dental practice.**

Our visit with University Dental Professionals revealed that remodeling or building new office areas requires addressing space and other limitations, but committing to new equipment, cabinetry systems and a layout centered on instrument management systems can make even a small area more efficient, safer, and easier for employees.

The renovation of Dr. Graham’s instrument sterilization area demonstrates the importance of evaluating the problems of an existing workplace, identifying issues that the redesign should address, and seeking solutions to those problems. Some of the benefits of going through the process are tangible, such as saving time and money by improving efficiency. Other benefits are more subtle, but no less important: less stress, more pride in the new office, and confidence and happiness that extends to the patients. ●●●

**About the Author**

*Nancy Andrews, RDH, BS, is a nationally recognized speaker, consultant, and author. She may be contacted at [www.nancyandrewsrdh.net](http://www.nancyandrewsrdh.net).*