



## INSIDE THE CURRENT ISSUE

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### Central Services

## Driving best practices: A multi-faceted goal for SPDs

by Julie E. Williamson

As virtually any sterile processing professional can attest, achieving quality, maximizing efficiencies and striving for the highest of standards within the discipline cannot be adequately attained by simply adopting one – or even several – key practices.

On the contrary, success in the SPD comes from the acceptance and consistent adherence of a wide range of practices, not all of which necessarily garner the same outcomes in all facilities. Because no two SPDs are identical, it's up to each department and organization to determine the practices, policies, processes, and technologies that will drive the best outcomes for their own staff and patient populations.

Still, there's no question that the lessons SPD professionals can learn from one another can be invaluable, which is why *Healthcare Purchasing News* routinely seeks out SPDs that have witnessed the value of their own so-called best practices firsthand and are willing to share their experiences with others. As you will read, success comes in many different forms, and stems from hard work, discipline and a department- and facility-wide commitment to buck tradition and push best practices to new heights.



*Strong Memorial Hospital's Materials Processing Department*

### Breaking the bottlenecks, boosting performance

Like many other sterile processing departments, Strong Memorial Hospital's Materials Processing Department in Rochester, NY, was facing some significant productivity and performance challenges

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that were raising the potential for errors, bottlenecks and cross-contamination, and leading staff morale on a downward spiral.

The primary source of their angst was two aging indexing tunnel washers – purchased in 1997 — and one single chamber instrument washer that broke down almost daily, slowed productivity to a snail's pace and, not surprisingly, led to some unhappy customers who often took out their frustrations on the already beleaguered SPD team.

"When an individual chamber broke down, the entire indexing tunnel washer was put out of commission," noted Frank Riggi, administrator of Strong Memorial Hospital's materials processing department, adding that when it did go down, it was often for as long as four days. "During these periods, our staff had no choice but to strain the capacity limits of the second indexing tunnel washer in the effort to keep up with the demand for surgical instrumentation." The department, which began using the TOSI test to verify cleaning efficiency, saw TOSI failure rates of 25-50% on a daily basis. This caused the department's productivity to plummet even more because of the need for more manual cleaning and reprocessing, according to Riggi.

The frustrations from all sides were certainly understandable. Not only was the processing department responsible for the cleaning, decontamination and sterilization of all surgical instruments for the University of Rochester Medical Center's Strong Memorial, which includes a 750-bed care center (the largest in the area), the hospital had also recently added 12 new operating rooms to the 24 existing surgical suites. Despite the increasing demand, the MPD still had to rely upon the inefficient, poorly functioning washers.

It wasn't uncommon for instruments in need of assembly and washing to spill over to the next shift. Evening shift workers, for example, would often arrive to find a large backlog of instruments, and needless to say, they were less than eager to come to work given the anticipation of bottlenecks and the mounting pressure to play catch-up before the next morning's procedures. Strong Memorial's nearby sister hospital also felt the pinch because it had to step in and help process the backlogged instruments.

Cross-contamination risks were another major concern and occurred every time the indexing tunnel washer doors opened. Aside from that, the aging equipment was extremely noisy, consumed valuable floor space and gave off a tremendous amount of residual heat, which pushed the temperature on the decontamination side to nearly 85 sweltering degrees. Eventually Strong Memorial recognized that changes were in order and turned to Getinge, which was literally up the road and was already helping repair the existing equipment (which came from another vendor), for assistance.

Strong Memorial's MPD opted for the integration of a series of Getinge 8666 washer/disinfectors with the Getinge Air Glide Shuttle System. The washer/disinfecter would provide the MPD with large, unobstructed racks to accommodate a wide array of types and sizes of instrument sets and sterilization containers, and drive efficiencies through energy-saving heat transfer technology that cut process times. The integrated AGS would free up valuable floor space and its automation would reduce the need for handling and lifting, and allow staff to allocate their time elsewhere.

Getting to that point would take time and patience, however. While the department waited for the new equipment to arrive and for the required construction to take place, the old equipment needed to be regularly serviced to stay operable (as much as possible). It was no easy undertaking. Approximately one week before the new tunnel washers were to arrive, one of the two existing tunnel washers officially died, leaving Riggi and his team with just one.

"Obviously, it was a very difficult situation," said Riggi. Fortunately, it was temporary.



In January 2007, the new six-unit system began operation in the MPD. With the new system, a single shuttle moves along the soiled side of the aligned washer/disinfectors, and another operates along the clean side. Wash carts are placed on the loading conveyor at a single point and don't have to be manually moved again. Once a washer/disinfecter completes a cycle, the AGS shuttle automatically delivers the next soiled load to the next available washer.

"We just load the manifold cart onto the conveyor and it loads automatically," raved Riggi. Given that the department operates round-the-clock and processes at least 400-500 trays each day, the improved efficiencies and system reliability can't be ignored. Unscheduled downtime has been eliminated, the need for manual cleaning has been greatly reduced and TOSI testing has become "100% successful." Bottlenecks, which would often keep the decontamination area at a frenzied pace until midnight or later, are also a thing of the past. These days, Riggi said the decontamination area is "easily free of all instruments by 8:30 pm."

And the benefits didn't end there. More efficient and reliable equipment also resulted in less detergent use. "With the old washers we were going through 30-gallon drums of [pre-wash and main-wash] detergent about every other day. Now it's only every couple weeks," said Riggi.

Comfort levels in the decontamination area have also gotten a much-needed boost. Noise levels have been dramatically reduced and the once sky-high temperatures have now dropped to a cool 68-70 degrees. "The changeover has been a tremendous morale and productivity booster."

## Stepping up the standards

While consistent standard adherence is an essential element in sterile processing departments' quest for quality and process consistency, some facilities operate under the assumption that merely meeting standard requirements isn't sufficient.

One such example relates to load monitoring with a biological indicator. Although the Association for the Advancement of Medical Instrumentation recommends monitoring sterilization loads with a biological at least weekly, and preferably, daily – and the monitoring of every implantable device — some SPDs have opted to up the frequency. Take Detroit Medical Center and Knoxville, TN-based Fort Sanders Regional Medical Center – both of which monitor each and every sterilization load and wouldn't dream of doing any less.

Although, admittedly, some in the sterile processing industry may consider every load monitoring overkill, those at the helm of these two hospitals contend it's a practice that, despite going above and beyond AAMI standards, is well worth the effort. For Fort Sanders Regional, the move to every load monitoring occurred about ten years ago, after a major recall left the facility reeling.

"We had been following the standard of once daily monitoring, and monitoring of every implantable, but after that significant recall and all the time, stress and [disruption] that went along with it, we decided to become more proactive," noted Donna McLaughlin, CRCST, sterile processing manager for Fort Sanders Regional Medical Center. The SPD, which processes upward of 8,000 instrument trays a month, and operates out of a facility across the street from the hospital – linked by an underground corridor – now can quickly and easily track instruments with negative or questionable biological monitoring results.

Much like Fort Sanders Regional, Detroit Medical Center's SPD, led by corporate director of sterile processing Patti Koncur, wanted the same degree of accountability for every load processed, not just implantables, and not just items subjected to steam cycles. Not only would every load monitoring



promote quality and better patient outcomes, DMC reasoned, it would also result in far less headaches in the event of a recall.

"Even in a small facility, if you're monitoring loads once a week and have a recall, it can be a nightmare having to track down everything that was [processed] that week," she explained. "When you consider the actual cost of a recall, including having to tell a doctor that he may have used a [non-sterile item] on one or more of his patients, you see that the cost of using a test pack is negligible." To be clear, DMC is anything but small. The 24-hour SPD, run by 101 sterile processing professionals, processes more than 3,000 trays per week and is responsible for eight facilities on four different DMC campuses.

Every load monitoring is nothing new for Koncur. It's a practice she's advocated for and implemented for at least 15 years, at every facility she's worked.

"Some people may think every load monitoring is overkill, but when you consider all the variables of a cycle, I believe you can't be too careful," she said. "Standards are minimum guidelines, and I don't settle for the minimum." **HPN**

## Sterile processing: How far we've come

*As technology continuously advances in the operating room and other direct patient care areas, sterile processing's capabilities have had to evolve right along with it. Here vendors offer insight into what they believe has been the greatest step forward – in terms of either improved processes and practices, or their own industry-leading technology – in the sterile processing discipline.*

## GETINGE

The increasing requirement for SPD staff to become certified in their profession as "infection preventionists." This small step fuses continuing education with training, thus improving the products and services they deliver, which enhances SPD staff self-esteem and increases their value to the institutions and customers they serve.

**Mike Cain, director of product management, Getinge USA**

The continuing use of advances in technologies to assist the end-users in their daily sterile processing tasks is always a step forward. Ergonomic technology, green technology, and automation technology have all contributed to making the job of the CS worker physically easier, while at the same time enhancing the quality of their work as it affects infection control in the healthcare facility. Also, the growing focus on certification of the CS worker by local and state agencies ensures a continuing and measurable emphasis on training and professional advancement within the SPD community – once again, favorably affecting infection control in the healthcare facility.

**Mike Carragher, product manager, steam sterilizers, Getinge USA**



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The most noteworthy development in the last 12 months is the adoption by the AORN of new guidelines for proper reprocessing of surgical instruments. This includes the recommended practice of testing the performance of automated cleaning equipment on a



minimum weekly basis, after installation and after a major repair. For the first time, a North American standards body has not only advocated for the periodic testing of cleaning process (as AAMI, for instance, has done in ST79 and other documents), but has specified a minimum test interval - in this case weekly. Now, sterile processing professionals have a powerful ally in their mission of improving the quality and performance of their processes. The specific citation is: Recommended Practices for Cleaning and Care of Surgical Instruments and Powered Equipment, Section XXII.a

**Ralph Basile, vice president of marketing, Healthmark Industries Co.**

## 3M Health Care

We believe the greatest step forward in sterile processing is the fundamental shift in how the Sterile Processing Departments reprocess instruments for patient use. While the mission of SPD hasn't changed (to provide sterile instrumentation in an optimal condition for use at the lowest possible cost), many factors impacting how they perform their mission have. For example, there continues to be significant advancements in medical instrumentation, often coupled with unique requirements such as special cleaning instructions or extended sterilization cycles. The complexity of these devices and the wide-ranging decontamination and sterilization processes required to ensure high-quality patient care has created a critical need for sterile processing information systems. A busy SPD with no supporting information system can quickly become inefficient and reactive.

Sterile Processing Information Systems such as SPM Software with 3M Attest Monitoring Interface (the only system that provides real-time availability of 3M Attest Rapid Readout Biological Indicator results), represent the best way to manage these new complexities while providing sterile devices in the most cost effective manner. These systems provide information at the point of need, collect data to ensure quality and compliance, provide reporting capabilities on key productivity metrics, support lean workflow design, and interface with equipment and other clinical applications. In short, they are critical in helping SPD leaders provide high quality care in light of changing requirements for instrument reprocessing.

**Tammy M. Torbert, marketing manager, 3M Sterilization Assurance**



As more and more medical devices come to market and infection control standards are

monitored by industry groups, there is an acute need to provide accurate and up-to-date guidance to hospital staff on which devices can be sterilized in a particular sterilization modality. When visiting customers each week, I'm constantly surprised when I see the mounds of outdated paperwork and thick manuals they need to sift through to determine whether a device can be sterilized in a specific sterilizer. To fulfill this unmet need and demonstrate its commitment to following the Association for the Advancement of Medical Instrumentation and Association of periOperative Registered Nurses Standards and Recommended Practices, ASP took the lead and developed the STERRAD Sterility Guide. This is indeed one of the most recent innovative steps forward. The ASP STERRAD Sterility Guide is the first-of-its-kind online tool designed to help healthcare professionals around the world quickly, easily and accurately determine which instruments can be sterilized in STERRAD Systems.

With the ASP STERRAD Sterility Guide, STERRAD System customers can simply visit the STERRAD website to receive a timely, accurate - and current - answer. By following a few simple steps on the new website, [www.sterrad.com/sterilityguide](http://www.sterrad.com/sterilityguide), STERRAD System customers can immediately obtain confirmation 24 hours a day, seven days a week as to whether a device can be sterilized in a STERRAD System. All devices listed on the STERRAD Sterility Guide have been approved for use in a STERRAD System by the appropriate medical device manufacturer. ASP has partnered with medical device manufacturers around the world to add new devices on a regular basis.

**Barbara Trattler, RN, MPA, CNOR, CNA, and director of clinical education at ASP**



We believe the most important technological step forward is the advent of low cost, fast cycle time, flexible capacity, room temperature sterilization methods. The room temperature

instrument sterilization approach demonstrated by Germgard Lighting LLC utilizes a unique, oxidizing gas mixture called RG. The gas mixture includes ozone, a proven sterilant for centralized instrument sterilization, but it also contains oxidizers much more powerful than ozone. The instrument or instruments to be sterilized are placed in scalable, semi rigid, single instrument pouch or multi instrument kit, which is then sealed and is impervious to pathogens or gas flow. Using an innovative, patented approach, RG is continuously created and maintained within the pouch or kit. No RG leaves the sealed pouch or kit and it is converted back to harmless gases before the pouch or kit is opened. The unwrapped surgical instrument, or set of instruments, continue to remain sealed in the pouch or kit until used, and there is no handling of the instrument until opened.

The total cycle time for the process is much shorter than for steam sterilization; or any other room temperature, gas sterilant process. Currently, we are running validation testing placing *Geobacillus stearothermophilus* spores at the center of 1 meter long, 3 mm diameter lumen test structures. The cycle time is 20 minutes. We believe that even shorter times are possible. Shorter cycle times are important since they reduce instrument damage and accelerate inventory turn around. This short cycle time makes Germgard's method unique and ideal for clinical environments as well as for rapid sterilization in the OR and mobile hospitals. The unit is smaller than current table top offerings, but has flexible, expandable capacity. Since the pouches are sealable, the efficiency is not constrained by fixed capacity. Overall the short process is less expensive. We calculate that it will be a 10x improvement over current methods on a cost of sterilization per tool basis. It also will use very little electricity per cycle, no water, produce very little waste, and is not explosive or poisonous, so it will drive the trend towards more environmentally friendliness and safe techniques.

**Peter Gordon, vice president of marketing and founder, GermGard Lighting LLC**

## STERIS<sup>®</sup>



In the last several years, automated washing technologies have advanced to provide the user with more information about the cleaning process, specifically the documentation of individual cycle parameters. In addition, cleaning process challenge devices have evolved and added new resources to the SPD quality assurance toolkit.

In addition, software advancements now allow us to track reusable medical devices through the various stages of reprocessing. More importantly, the SPD has gained additional administrative support and acceptance, both in terms of financial support and because they are now a recognized contributor to a sound quality initiative for healthcare facilities. The sterile processing department now has the ear of Sr. management in healthcare facilities, who understand the importance of the return-on-investment for infection prevention.

**Richard Schule, director of clinical education, STERIS Corporation**



SPSmedical believes the greatest step forward in the sterile processing discipline has been the recognition of this critical area of healthcare as a profession and the development of standards. When I came into this industry over 25 years ago, sterile processing was seen as a menial job that was done by people hired off the street with no experience or training. It was common to see SPDs without standardized procedures and a general lack of understanding (and respect) for the reprocessing tasks throughout the facility. Over the years, this has drastically changed primarily due to the complexity of new instrumentation and their reprocessing procedures which require special attention to cleaning, disinfection, inspection, packaging,



sterilization and handling. Sterile processing best practices from AAMI and AORN, provides a reference for standardization and recognition of the important role they play in patient safety. Today, we have a large and growing number of certified sterile processing personnel, an abundance of continuing education programs and materials available, sterilization recommended practices adopted by ANSI as our American National Standard, and respect for the profession of sterile processing as a critical part of the surgical team.

**Charles Hughes, GM/educator, SPSmedical Supply Corp.**



The greatest leap forward in the sterile processing discipline has been the use of technology in aiding the education of sterile processing staff. Utilizing the internet, sterile processing professionals can explore various solutions in one sitting and can communicate with many vendors without having to take considerable time to do so, especially important in these days of dual and multi-source contracts. This ability ensures that sterile processing professionals are increasingly more informed about products and services open to them and that they can do so on their schedules being less and less reliant on the efforts of a sales representative. This leveling of the playing field will continue to force products and companies to stand on their own merits and will increase the exposure of quality products and services offered from specialty and non-traditional suppliers.

**Dan Dwyer, Raven Labs**