

ENSURING SUCCESS: Become a Preceptor for Robotic Assisted Surgery Instruments in the SPD



BY CHRIS PENNUCCI

Seventy eight percent of U.S. surgeons expressed interest in utilizing robotic assisted surgical (RAS) technologies with only 53% currently using this technology.¹ This interest is driving growth in the number of RAS procedures, expansion of the types of procedures supported by RAS, and the manufacturers of surgical robotic equipment. Sterile processing departments must adapt to the increasing volume and complexity of RAS instrumentation reprocessing.

Correct reprocessing of RAS instrumentation is critical to maximizing usage of limited equipment and successful patient outcomes. Proper training is vital for success and begins with a good sterile processing preceptor.

What is a Preceptor?

Whereas formal educators oversee the education of an entire department on correct techniques in reprocessing, they are often unable to provide personalized training to

new technicians, especially when several new staff members begin at the same time.

This is where preceptors come in. Preceptors are front-line staff who work side-by-side with new staff giving them the hands-on experience and guidance they need.

Often, precepting roles are assigned to the most experienced technicians, but it is important to remember that experience and knowledge are just one piece of the puzzle for a successful preceptor. A sterile processing technician can be knowledgeable, experienced, and efficient in their job, yet they might not be proficient at training others. A good preceptor must possess other qualities that support training. These include:

- **Patience** - Individuals learn tasks and responsibilities at different speeds. Preceptors must accept the need for repetition without getting upset or frustrated.
- **Empathy** - Sterile processing is a demanding and stressful job. When new staff become overwhelmed, the

Learning Objectives

1. Identify traits of a good preceptor.
2. Considerations when training staff on RAS instruments.
3. Establish a plan for staff when they are working on their own.

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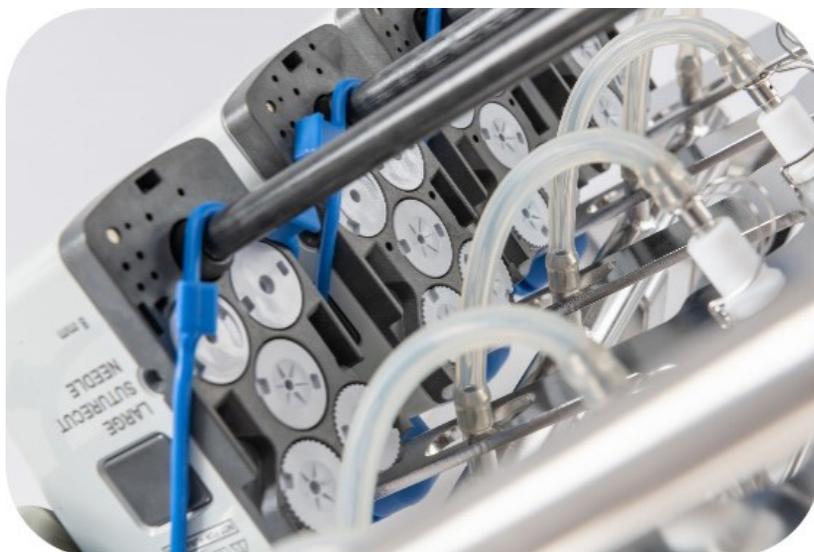


Figure 1: RAS instrument racks have unique connectors to ensure proper mechanical cleaning.

preceptor should possess the emotional intelligence to understand and support inexperienced staff in this stressful environment.

- **Resourcefulness** - Preceptors must know the resources available, such as databases with instructions for use (IFU), and adapt their teaching style to meet the needs of the staff member. Some people prefer to listen or read about the task while others prefer being shown. Preceptors should use a variety of methods and resources to train staff.
- **Supportive** - Learning new things can lead to staff and preceptor frustration as new staff cannot do things as quickly or efficiently as experienced technicians. A good preceptor is sometimes the supportive advocate for new staff and motivates them to keep going.
- **Effective Communication** - Effective communication is a two-way path. First preceptors must effectively communicate information and expectations to the staff member whether they have little or a lot of background knowledge. Second, preceptors must effectively communicate the needs and challenges of the staff member to educators and sterile processing leadership with responsibility for department training and education.

A preceptor position is a big responsibility. The preceptor teaches skills, but more importantly, guides and helps staff adjust to their new work environment and serves as a role model for the position.³ Precepting takes time, but if done effectively, it makes the team stronger.

Precepting Robotic Assisted Surgery (RAS) instrument processing

Precepting staff in RAS instrument processing involves thoroughly knowing all steps in the process and effectively conveying that knowledge to

others. Preceptors may work with both experienced and inexperienced sterile processing technicians.

New staff can find the decontamination area to be a foreign world. Working in full PPE can be challenging; there is a heightened risk of working with biohazardous materials; and communication can be more difficult in a noisy environment. Preceptors should take the time necessary for new staff to feel comfortable so that they can learn and retain all they are being taught.

Experienced staff bring knowledge and skills from processing similar instrumentation. Preceptors should confirm current skills and concentrate training on areas where RAS instrumentation processing is different.

Most mistakes made with RAS instrument processing occur during manual cleaning. Manual cleaning lays the foundation for success in all subsequent steps of processing. Preceptors should pay special attention to:

- soak time adherence
- correct priming and flushing of ports as listed in the device IFU
- missed or inadequately removed soils in joints and cables of the device's distal ends
- practices, like stacking, that cause damage to the intricate parts
- the correct brushes and tools are used
- identification of different cleaning requirements between RAS instruments

This list is not all inclusive. Preceptors should review IFU and department procedures and policies to identify all areas of manual cleaning to be confirmed. Competency checklists can help identify these critical tasks to confirm.

Mechanical cleaning includes ultrasonic equipment and washer-disinfectors. Preceptors should ensure that staff know which items can be

Lesson:

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Quiz Answers:

1. B, 2. C, 3. A, 4. B, 5. B, 6. B, 7. D, 8. B, 9. D, 10. D

processed in which equipment and how lumens are connected to the mechanical cleaners.

A great boon to RAS instrument processing has been the development of specialized RAS racks used with validated washer cycles. These often negate the use of ultrasonic cleaners and decrease manual cleaning steps. Incorporating these processes may result in a 25% reduction in manual cleaning time, per set of four instruments, equating to an overall decrease of 66 minutes of processing time!⁴ However, not every RAS instrument can be processed within RAS racks.

Preceptors should pay special attention to:

- proper identification of the mechanical cleaner selection and use
- necessary connectors are used
- connection points are clear and undamaged
- the necessary steps and importance of manual cleaning when using a RAS rack
- the correct rack, cycle, and validated chemistry for RAS rack validated instruments is used
- items that are incompatible with mechanical cleaning, such as robotic cameras

A crucial step prior to cleaning is determining if RAS instruments can be reprocessed again or have reached their end of life. Robotic arms typically have a usable life stated as the number of times they can be used in a procedure and the maximum number of sterilization cycles they can undergo. These numbers are different counts and tracked differently. Some RAS instruments have a built-in indicator to determine when they have reached their maximum number of uses, but processing cycles are tracked by sterile processing department procedures. Preceptors should ensure that:

- staff can identify the number of uses and number of processing cycles that remain
- relate what event counts as a processing cycle
- properly dispose of instrumentation that can no longer be used

Intricate moving parts of RAS instruments demand close inspection for damage and residual soils prior to assembly. Many IFUs require 4X magnification, which may be different than standard workstation lighted magnification. During inspection, preceptors should ensure:

- that 4x or greater magnification is used
- staff confirm function and use appropriate inspection tools
- ports are purged with air
- lubrication is completed as instructed
- proper use and interpretation of residual soil tests, if applicable

Sterilization cycles and processes are identical to those used on other surgical instruments. Correct packaging of



Figure 2: Staff should identify necessary accessories for packaging RAS instrumentation.

RAS items is vital for sterilization and aseptic presentation when used in the operating room. RAS instrumentation can be individually wrapped or pouched or grouped within a single wrapped tray. Preceptors should ensure:

- the correct packaging method is used
- the staff identifies the necessary accessories, such as instrument positioning cards
- the staff distinguishes between steam and vaporized hydrogen peroxide / gas plasma sterilization methods
- packaging techniques to avoid instrument damage

Finally, with all steps of reprocessing, it is important to communicate WHY all these steps are important. New hires, unfamiliar with a healthcare environment, may easily view some steps as unimportant, or added work. Explaining why each step matters, and how skipping steps can cause harm to a patient, which could easily be someone they know, or even themselves, helps to drive home the gravity of their work and can instill a feeling that their work matters.

Preparing to work independently

Training staff should not be rushed but eventually they will have to function independently. Setting staff up for success requires careful planning and preparation. Training is an important part but teaching them to utilize the resources at their disposal is integral to independence. Common resources that should be utilized include but are not limited to:

- The location of the IFU library and department policies and procedures
- Visual aids such as charts, lists, or diagrams

- Introductions to experienced staff members to ask questions of
- Tracking system instructions and reminders

Finally, ensure that competency checkoffs are done thoroughly, and staff are comfortable with everything on them before signing staff off to process RAS instrumentation. The role of the preceptor is to ensure that staff can effectively perform all necessary processing tasks on their own. Signing someone off on their competency before they are ready sets them up for failure and is a great disservice to the department, and most importantly the patients served.

Conclusion

RAS utilization is increasing and with it the numbers and types of RAS instrumentation. Strong preceptors are vital for reprocessing success of these specialized devices. Knowing how to thoroughly clean, inspect, and package

RAS instruments takes time to teach and learn. Investing in RAS preceptor development today will position both preceptors and departments for success. **HPN**

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Lesson Title Goes Here - Practice Quiz

- 1. In the future RAS procedures are expected to what?**
 - A. Decrease
 - B. Increase
 - C. Stay the same
 - D. None of the above
- 2. SPD preceptors should possess knowledge, skills and _____.**
 - A. A college degree
 - B. Management experience
 - C. Supportive qualities
 - D. Certification
- 3. Which is not a trait of a good preceptor?**
 - A. Impatient
 - B. Empathetic
 - C. Supportive
 - D. Knowledgeable
- 4. Where are most mistakes made during training?**
 - A. Assembly
 - B. Manual cleaning
 - C. Mechanical cleaning
 - D. Sterilization
- 5. Which statement is true about RAS washer racks?**
 - A. They increase reprocessing time
 - B. They decrease processing time
 - C. They eliminate the need for all manual cleaning steps
 - D. They can be run on any cycle
- 6. All RAS instrumentation can be processed through mechanical cleaners.**
 - A. True
 - B. False
- 7. The number of uses is tracked by the _____, but the number of processing cycles is tracked by the _____.**
 - A. surgeon, circulating nurse
 - B. OR manager, sterile processing manager
 - C. The Surgical Robot, RAS Preceptor
 - D. RAS instrumentation, sterile processing department
- 8. Many RAS instrument IFUs specify what magnification for visual inspection?**
 - A. 3X
 - B. 4X
 - C. 5X
 - D. 10X
- 9. How may RAS instruments be packaged for sterilization?**
 - A. Pouched
 - B. Wrapped individually
 - C. Wrapped as a set
 - D. All of the above
- 10. When should competency checkoffs be completed?**
 - A. The department is short staffed
 - B. There are a lot of people left to train
 - C. RAS procedures have quickly increased in volume
 - D. After demonstrating effective performance