

The Motor in the Machine: A Lesson in Surgical Processing

When physicians-in-training think about surgery they usually imagine clean, shiny operating rooms (ORs) with fancy equipment and monitors. They imagine bright, focused lights directed toward the operating table, where a surgical team actively engages in addressing an urgent health concern. They think of physicians and nurses gowned and huddled over sterile equipment, ready to operate. Likely, the last thing that learners think about is how ORs function safely and efficiently. One key player in this scene is the surgical processing department, which acts as the motor in the machine that is the OR.

The surgical processing department of the OR can be described as a “magical” place where dirty instruments go in, and then reappear clean and ready to use. As one spends time observing this, there has to be appreciation for the individuals who pride themselves on improving patient care through efficiently directing the behind-the-scenes operations.

As medical students or residents, we learn relatively little about how a hospital functions. We learn the pathophysiology of disease, and try to keep up on rounds until we move onto the next service. Knowing virtually nothing about surgical processing, I was baffled by the prodigious amount of organization and attention to detail.

The backrooms of the OR are filled with cabinets packed with bins of sutures, tape, synthetic skin, and other supplies. These cabinets are linked to a system that rolls and compresses them for efficient use of space. Every sterilized item (both disposable and reusable) is placed into this highly organized system with a code that allows searching for the cabinet, row, or bin that holds the item.

Everything about this setting reflects a system that is carefully planned and has efficiency in mind, from how to set up an OR cart to where items in a surgical kit are arranged. The intent is to make the surgeons’ life easier, reduce OR time, and improve patient care. This attention to detail can be viewed as an art, as surgical processing staff proactively foresee problems and strive for excellence.

It is important for anyone involved in surgery to understand and appreciate the service surgical processing provides to ensure safe patient care. For

instance, the perioperative nursing staff work with the surgical processing department on an ongoing basis.¹ Understanding what goes on behind-the-scenes is how future physicians can be real partners in preventing hospital-acquired infections.

Process errors in surgical processing can be fatal. As an example, “the largest disinfection failure on record involved the distribution of an inactive lot of glutaraldehyde disinfectant solution to 60 hospitals in Belgium and involved 34 879 patients.”² In 2006, failure to reprocess prostate biopsy equipment in the US Department of Veterans Affairs exposed 2075 patients.² Recently, a drug-resistant organism in endoscopic equipment resulted in scopes being cleaned to a high level of disinfection regardless of prior use.³

With surgical site infections representing 22% of the 722 000 yearly health care–associated infections, it is important for all physicians to understand what must be done to reduce these numbers.⁴ It is particularly important for future surgeons to understand the difference between instruments that are sanitized and those that are sterilized, and to deeply comprehend the ramifications of dropping sterile equipment or using an endoscope that has not been properly stored. I suggest that surgery residency programs include a half-day shadowing requirement to allow interns to observe the processes, reports, and quality control measures involved in surgical processing. My experience with surgical processing has provided better insight into how this service makes surgeons’ lives easier and helps them provide the best service to patients.

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