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Editorial

In my Experience: Obtaining Efficiency in Orthopaedic and Spinal Surgery

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The author shares his experience in obtaining peak OR efficiency.

I am obsessed with efficiency in the operating room. It is not because I am in a rush. It is not because I want to get off of work early. It is not because I am impatient. I am obsessed with efficiency because efficient surgical teams are the best teams which provide the best outcomes.

There are many reasons why efficiency benefits patients, surgeons, surgical teams, and hospital systems equally. First and foremost (and most importantly), surgical and anesthetic time has been shown to be related to several postoperative complications including infection risk and delirium in elderly patients. Minimizing the time in the operating room helps provide patients with the best possible surgical outcomes. In my experience patients with shorter operative times recover faster with shorter hospital length of stay as well. The most important thing to remember, however, is that the surgery still needs to be performed to perfection, even if operative time is reduced. Shorter surgery does not mean cutting corners- it is accomplished by removing inefficiencies and cutting out unnecessary steps.

In addition, surgeons when they are more efficient have more time to do more surgical procedures. There is good data that shows that high-volume surgeons have better outcomes than low volume surgeons across numerous subspecialties of not only orthopedics, but general surgery and other surgical specialties as well. As surgeons gain more repetitions and get more experience, they see more variations in human anatomy and human pathological processes. They then learn to adapt and are able to move more efficiently through surgery. Therefore, efficiency begets more efficiency.

Surgical teams also benefit from efficiency by having more repetitions and become better at their jobs helping the surgeons. An example is joint arthroplasty which can be very protocolized- an experienced scrub tech/surgeon team doesn't even need to talk during the surgery- each instrument is ready to go at the next step. No waiting for the saw or implant! Optimizing on time starts and decreasing turnover time must be promoted, often with assistance and prompting by the surgeons. If a hospital system lacks the ability to perform efficiently, surgeons may choose to seek out more efficient systems or work with OR administration on finding ways to encourage teamwork and promote a culture of efficiency.

Hospital systems get paid by the surgery, therefore the more surgeries they are able to complete the more money they will make creating a healthy financial situation. Generally, many of the expenses in the operating room consist of indirect expenses, which do not change whether you do three total joints, four total joints, or 10 total joints in a day. Expenses, such as the electricity to keep the lights on, the cleaning crew, and paying the scrub tech their hourly wage do not change based on the number of joints or spine fusions performed.

In my training, I had mentors who were highly efficient at performing carpal tunnel release, knee arthroscopy, total joint arthroplasty, and spine surgery. I picked up tips and tricks from each of them in the operating room, but also in terms of running efficient practices outside of the OR. One of the most important things to remember is that operating room efficiency is only one part of the puzzle. You must be efficient in the office in terms of assessing patients and booking surgeries. Physician extenders such as PAs and NPs who are well experienced and trusted are fundamentally important to this process. Surgeons also must be efficient in surgical planning- you cannot toil over plans and make last minute changes to surgical plans if you wish to remain maximally efficient. Surgeons must also be efficient in postoperative care protocols- your nurses and administrators can't be calling all day with questions as that will also dampen efficiency. While an efficient operating room is an important piece of the puzzle, in a high-volume prac-

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tice there must be efficiencies from start to finish to allow excellent patient care in less time compared to inefficient practices.

Most importantly, maintaining maximal efficiency in surgery allows extra time for the surgeon to enjoy life with their family, do activities and hobbies outside of the hospital, complete administrative duties, or perform research . I often see spine surgeons operating late into the night on elective surgical procedures that an efficient team could be done with before dinner time. Being home for dinner to speak with your children and spouse about how their day was is paramount to a healthy balance in life.

There's nothing I like more than to debate other surgeons on the benefits of efficiency. The less efficient surgeons may be less efficient because they *enjoy* performing surgery that way. For them, as long as surgical outcomes are optimal and they have a healthy life outside of the hospital, who am I to argue? To each their own, but for me, efficiency is king.

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