sinus sutures for an aortic valve replacement you only loaded the needle once and nailed it.

During training, I also thought a lot about how to maximize the learning potential from each case. Before each case, I would write down what I wanted to do well or improve on. After each case, I would ask the attending for specific aspects that could be improved, and then I also wrote down items that I wanted to do better. Clearly, not all people learn by writing and visually seeing diagrams drawn out, or writing down things before and after each case, but being intentional about your training and trying to progress through and as a result of each case is key. Also, asking for feedback from your attending after each case on how you can improve shows your interest in becoming a better surgeon. This engages them, and sometimes you'll be surprised what they say—things you may never have noticed. You can also offer to dictate the case; this helps you review the specific steps of the case.

So why don't residents practice/prepare more or at least discuss it? Perhaps in part it appears uncool or weak—like those “closet gunners” in medical school who pretended that they didn't study. Those who practice or prepare, admit that they don't have it all down. Frankly, we are in training because we need to learn—if we knew how to do it already, we wouldn't be in training. Certainly, time during

training is at an all-time premium, but this is also the key window to learn cardiothoracic surgery.

Deliberate practice and developing a method for how to prepare certainly doesn't end at the completion of training. All of us to excel must continually strive to improve, to not be satisfied with where we are, to visualize our destination and the road to get there. Whether this is fueled by a chip on their shoulder or just an insatiable internal drive, anyone who is great in their field continually works through this process. Obviously, there is no one answer or method, but a trainee who carefully considers what this process looks like for himself or herself will be greatly benefitted. This not only optimizes your progress as a trainee, but prepares you for your career ahead.

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See Editorial page 2340.

Check for updates

Commentary: “If you can meet with triumph and disaster and treat those two impostors just the same”

George L. Hicks, Jr, MD

If you can meet with triumph and disaster and treat those two impostors just the same.

—Rudyard Kipling

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CENTRAL MESSAGE

One person's advice about succeeding in a surgical residency.

The unforgettable lines of the immortal Rudyard Kipling poem “If”¹ remind us that life is a battle, a constant struggle to achieve perfection such that in the end “you

can talk with crowds and keep your virtue, Or walk with Kings—nor lose the common touch.”

Dr Elizabeth Stephens’s editorial, “It’s a Long Way to the Other Side of the Table,” is a personal statement by a passionate trainee passing through this educational journey of surgical training in the search of surgical mastery.² Stephens uses her own experience to counsel others on how they might improve their learning process and/or environment to be the best that they can be. The title is an oft-quoted warning to residents in training that although certain operations performed by experts may seem easy and effortless, in reality, if one were to write out all the steps (and thoughts) that were part of the operation (cognitive task analysis), the early learners would become paralyzed with the sheer amount of information, judgment, and technique that is part of any successful procedure.

The author has provided a service for residents-in-training by outlining methods for approaching the daunting task of becoming a competent and autonomous master surgeon using self-critique, debriefing with attending feedback, review of observations, different techniques, and a modicum of simulation. It would seem in her institution the “chief” resident has uniformly mastered the operations to be performed and only after the patient is fully prepared and the crossclamp applied is the attending present or necessary.

I applaud the author for her clarion call to all residents to be proactive in the learning process and that showing up to the operating room unprepared either intellectually or technique-wise is an approach doomed to failure.

It is further noteworthy that the author understands that each institution and learner may be very different. At her institution, with what seems to be an all-consuming clinical load, learning outside the operating room is less emphasized than immersion in the pressure-packed crucible of the operating room. Thus, having to work by oneself in a sim lab after hours (while tired) is hardly a test of what a robust simulation curriculum might offer. This all-too-common scenario occurs because of lack of faculty commitment to teaching in the simulation environment (either too busy in the operating room or lack of interest

entirely), lack of dedicated time for skills training, and/or didactic learning or abrogation of the department’s financial responsibility to provide such time and space as mandated by the Residency Review Committee.

It is true learners can’t be passive and simulation teaching can best be applied to the early learner for deliberate practice or perhaps the masterful “chief” resident who could practice a complex approach rarely seen (commando, Konno, or even septal myectomies, to name a few). In reality, elite educational programs should seek a balance providing for dedicated educational time, if only once a month (limiting missed opportunities in the operation), whereby early learners in a less-intense environment might optimize their technical skills, as well as recognize and master cardiopulmonary bypass and clinical emergencies to improve patient safety and clinical outcomes.

In the end, the author provides a take-charge approach to her training and education and in the process has learned valuable lessons that should hold the reader in good stead throughout their surgical career. However, she accurately points out that few residents learn the same way and parenthetically approach their education as aggressively as she has. Kipling cautions us that

“If you can dream—and not make dreams your master;

If you can think—and not make thoughts your aim,

If you can meet with Triumph and Disaster

And treat those two impostors just the same”

It is that individual who will be the competent surgeon of tomorrow that every institution strives to produce, hopefully employing new educational paradigms to optimize the process.

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