C S in Surgery, a Personal Perspective

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Abstract This is a reflection of a 30-year career of a general surgeon, who has maintained a logbook of all his surgical work. Reading between the lines in this logbook, a number of essential qualities and traits needed for a successful career have been brought out. All these have been grouped into a novel way, using the letters “C” and “S” to describe each of them. Success in surgery relate to the tripod of Common Sense, dealing with the Changing Scenario, and having Civic Sensibility. Each component of this tripod is further broken down into several entities, all with the letter “C” and “S,” to finally give the benefits of such qualities to the surgeon, each of which also begins with the letters “C” and “S.”

Keywords Surgical career · Surgeon’s career · Perspectives · Qualities · Traits · Common sense · Changing scenario · Civic sensibility

I, perhaps, am the last of the breed of “true general surgeons.” I did not move on to any specialization, and as a surgeon in the urban Mission General Hospital, my operative work involved all regions of the body. I have been very comfortable operating in the head and neck, especially thyroid surgery; in the chest, especially for suppurative pleuropulmonary disease; all forms of abdominal surgery, both open and laparoscopic; hernia repairs; peripheral limb soft tissue and vascular surgery; and the excisions of the various lumps and bumps that abound in surgical clinics. It is

interesting to note that over 90 % of my work has been related to benign surgical pathology.

I have maintained a logbook of every operation performed, from the very first day of my career right up to even today. It has been my most educative experience. This was inspired by the very meticulous way my brother in the Indian Air Force maintained his logbook of every sortie and flight he made. Figure 1 is the graph that reflects in broad terms what my surgical work has covered. Today, I concentrate a lot more of the time on thoracic surgery and the open surgery repairs of the surface hernias, believing in the age-old principle of keeping the repair safe, sure, and simple.

To share a few basic statistics from my logbook, the total number of operations I have been personally involved with is 8,256, in the 30 years of the log. Mortality has been 1.3 % (109 cases), and this was more when I was doing more of the emergency work on compromised patients. There has been a morbidity of 3 % (251 cases), and this includes operative damage (like to the recurrent laryngeal nerve or to the CBD), the early postoperative setbacks (re-ops for bleeds), general surgical and medical issues directly related to the surgery (leaks, stump blowouts, infections, burst abdomens), and to late unfavorable results like recurrence, incisional herniae, and the like.

Looking through these very real figures, I could not come to any area of specific mention to write on for an article. Hence, I reflected on the readings between the lines in my logbook and have come up with some thoughts that perhaps would deserve mention in an article. As I know that a vast number of those reading this article would be postgraduates and budding surgeons in the making, I decided to put these thoughts together and share with you what it takes to shape and maintain a successful surgical career. Thus, I titled my writings as “C S in Surgery, a Personal Perspective.”

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Fig. 1 Bar chart showing range of general surgical work done

Why “C S”...?!!! Well, for starters, my initials are C S, my late father’s initials were C S, I was born at a Caesarian Section, and I am a Coronary Survivor, as a result of Cardiac Surgery. I have used this same set of letters to further expand and take us through the article.

A successful surgical career stands on a tripod of three strong pillars. The first is the quality of *Common Sense* in surgical practice. The next is related to our world which is always in a state of change, progress, and improvement, and hence, one has to have strategy to combat the *Changing Scenario*. Finally, success comes when one adds the fine inner qualities of life that I have grouped together as *Civic Sensibility*. We will now go through this tripod, along with the seven components that each limb of the tripod is made up of.

Common Sense

“Common sense is the knack of seeing things as they are, and doing things as they ought to be done.” ...Josh Billings. This to me is the primary aspect of surgical care and relates to both diagnosis and treatment. There are many inputs into the whole gambit of common sense, and these are:

(a) Communicating Skills

“Medicine is a communicating science!” It is all about how one communicates, not only with the patients, but across the board with all levels of the healthcare personnel, which determines the base of a successful surgical practice. One’s class IV staff is as important in the delivery of care as the CT/PET scan needed for diagnosis. It pays to maintain cordial relationships with all, helped by three simple common sense rules of communication, which are:

- *Common courtesy*, with the two Gs of greetings for the time of the day and good wishes at the time of parting
- *The tripod of good manners*, used with meaning and appropriately, of “please,” “thank you,” and “sorry.”

- *Be a good listener*. Patients can never tell their symptoms to the surgeon who will not listen to them.

Communication is of vital importance during pre-operative counseling, informed consent taking, post-operative updates, and in delivering good or bad news.

(b) Concerned Sympathy

This is the ability of the doctor to empathize with the patient. Without the love for people, a doctor cannot function effectively for long and can never establish the requisite interpersonal relationship with the patients. All forms of surgery are controlled bodily injury. All responses of the patient will revolve around a painful inflammatory response to trauma, besides which a whole metabolic sequence of events will flow, before recovery. Care, compassion, and understanding from the attending surgeon will ease this phase for the patient.

(c) Clinically Sound

For this, one must consider clinical safety in terms of diagnosis as well as for the preoperative and postoperative phases of a surgical patient. For diagnosis, follow a clear Common Sense concept, of common conditions with their common presentations as first, common conditions with their uncommon presentations next, then think of common presentations of uncommon conditions, before finally considering uncommon presentations of uncommon conditions. A constant vigil must be kept for what is termed “decoy” presentations, which often mislead the surgeon. I have even had a pneumothorax presenting as an inguinal hernia...!!! Another interesting case was the young lad presenting with an acute scrotal swelling, diagnosed as “epididymo-orchitis.” The soft nature of the swelling prompted the need for an x-ray of the area, which revealed gas. A subsequent erect abdomen x-ray then showed free gas under the diaphragm, and the laparotomy revealed an acute duodenal ulcer perforation.

The Common Sense proper preoperative preparation that follows a surgical diagnosis helps obtain the ideal surgical result. Time spent in the optimization of a patient for the surgery reflects in time and expense saved in the postoperative phase. As the saying goes, “A big operation in a fit patient is not a problem, BUT a small operation in an unfit patient could be a problem” [1]. Finally, being clinically sound entails a sincere and keen eye on the patient’s vital parameters to know all is well postoperatively. The ticking pulse is the first sign that all is not well and should not be ignored.

(d) Careful Scalpel

The hallmark of any surgeon is how well he cuts, dissects, sews, and restricts blood loss. Acquiring these

skills is quite easy and does not need much effort. However, as the old adage goes, “there are many bold surgeons, and many old surgeons, but there are very few old, bold surgeons.” It is very easy to learn how to operate and when to operate. But it is common sense that will tell you when not to operate. Not all that is technically feasible is in the best interest of the patient.

My logbook inputs on lessons learnt by having a careful scalpel are:

1. Beware of the young lady with RIF pain; it is most likely *not* acute appendicitis.
2. Beware of male diabetic gall bladder; this is going to be a surgical technical challenge.
3. An uncomplicated inguinal hernia *does not* cause acute groin pain.
4. Acalculous cholecystitis is a leading misnomer for the surgeon.

For any surgery that is not being done at more than six times per year, it is imperative to read through the surgical procedure and related anatomy before venturing into the surgery.

(e) Combat Stress

A surgeon's profession is indeed stressful. It involves the most direct contact between the doctor and the patient. However well the surgery has been performed, we still have a host of varied responses to deal with before the successful outcome is achieved. A popular saying relates to the abdomen—“as long as the abdomen is open, you control it. When the abdomen is closed, it controls you” [1]. Modern practice of surgery is fraught with dangers of litigation and uncalled-for questions by the public at large, the media in particular, and the lawyers in the courts.

Steps to help reduce stress during the operating sessions are to form teams who back each other up, to anticipate and call early for help, and when not sure, just back off the job. *He who runs away, lives to fight another day!* Today, they call this an abbreviated laparotomy, with every intention to return early when conditions and circumstances are ideal.

All stress can be combated by taking adequate, frequent, and total time off the surgical field. For me, it was sport, not actual playing of the games, but by being an avid follower of all forms of sport in the print and television media. For others I know, meditation, yoga, music, social work, or some good hobby were the stress busters.

(f) Create Stamina

Much of surgery is done on the feet. Complex operations take time, and one needs a certain level of physical

fitness to be able to perform surgery of a consistently high standard. A simple tonic for good body tone is a regular brisk walk for between 30 and 45 min a day, and this helps improve leg strength and tone the muscles of posture. Swimming is another very good option. Formal gym workouts often result in musculoskeletal breakdown that leads to loss of operating hours.

A good choice to both achieve fitness and have relief from stress is to take up a sport [2]. Tennis and golf are the popular choices. *The whole point is to make the time for these activities.* While on the issue of health, personal protection from viral diseases like hepatitis B virus prophylactic immunization and appropriate care in dealing with such positive cases are but more common sense put into practice. The last (tenth) fundamental responsibility of a medical person, as listed in the Canadian Code of Medical Ethics (update 2004), states “Promote and maintain your own health and wellbeing” [2]....!

(g) Compensation Safety

Today, we are in the days of “right to information,” “patient's rights,” and of course, a very litigant society. Medicine is not an exact science, and complications are to be expected. Society and Law are able to accept this, provided they have been explained, and informed consent has been taken. But “negligence” is unpardonable. Various little slips and shortfalls add up and end with a disaster that is seen as negligence. To safeguard against these claims for compensation, it is imperative to have a good medical indemnity insurance, as well as to have membership to profession-related national (and international) bodies, like the Indian Medical Association, Association of Surgeons of India, Indian Association of Gastro Endoscopic Surgeons, and the like.

Changing Scenario

We now move on to the second limb of the surgical tripod for success, and it is about how we, as surgeons, cope with the changing scenario.

Medicine is not a static science. The ingenuity and curiosity of man has no limits. Constant results of research and trials, innovations, and inventions flood the field. It is imperative that the practicing surgeon keeps abreast with the changes in his domain. Add the pressure of the modern media, literacy levels and awareness, the public now “demand” the latest in gadgetry and technology. Not only should the theory base be updated, but also the need to retrain and learn new methods is necessary. My own generation of surgeons has had to shift from the traditional “big cut” surgery to the minimally invasive surgical approach. New gadgets, technology, and techniques had to be learnt and mastered. Time was taken off to go,

witness, and learn from the initial maestros. My own little data show the wonderful effect that laparoscopic surgery has had up to 1997; all the gall bladders were done by the traditional open method; then, up to 2002, most of them were done by the laparoscopic route, with a 15 % conversion rate. Today, almost 98 % of the gall bladders are removed by the laparoscopic route only.

So, how does the practicing surgeon keep pace with this changing scenario in the delivery of surgical health care? The next few points will discuss this.

(a) Continuing Study

To keep up with the times, one has to devote time for professional reading. Subscription or access to a standard journal in surgery is useful. You must attend and be part of at least one annual conference, two operative workshops, and three continuing surgical education programs every year. The time has come when renewal of medical licenses will be linked to updates in knowledge and skills by points earned through the periodic attendance of continuing medical education sessions, workshops, and even online testing. Once again, a reference to the Canadian code of Medical Ethics, item 6 states, “Engage in lifelong learning to maintain and improve your professional knowledge, skills, and attitudes” [2]. This is best achieved by spending at least 3 h a week on current literature on the subject. This information is transferred into teaching sessions with students.

Preparation of papers for presentation and for publication teaches the skills to mine relevant information out of the mountains of medical data available today. To be involved in research and development helps in keeping abreast of time. I have spent over 4 years working with the scientists at CAIR to develop a virtual reality model, for training in laparoscopy. This was a very enlightening experience, and I am grateful to Dr. M Ramesh, the laparoscopic surgeon; my brother Air Marshall P. Rajkumar, who gave us the introductions; and the former President of India, Shri Abdul Kalam Ji, for funding this opportunity.

Using my own personal example, I have taken the medium of surgical quiz to transfer knowledge to large groups of colleagues and students, spicing it into a package of entertainment and academics.

(b) Cultivate Students

This is where teaching cadres are at an advantage. But this is not the domain of medical college, as the teaching and transfer of knowledge and skills can be done in any setup. Surgical work is a team effort, and the surgeon is the captain of the team. It is his duty to keep himself and his team updated on the latest, because it will be his patients who will benefit the most. It is wrong to assume

that a surgeon will be at his peak forever, and so, to keep the flow of knowledge and skill, one must enjoy the benefits of having a student following. The seeds of curiosity in the young minds must be sown, with appropriate questioning, and should be followed with the one providing the answers too. All question and no answer make the teacher a dull boy....!

(c) Certified Statistics

These words refer to the use of “evidence-based medicine” as the basis of all surgical decisions and interventions. It is important not to get carried away by every new gimmick that comes into the print form. In fact, there is a popular surgical aphorism which states that, “the problem with every new medical discovery, is that, it is practiced indiscriminately” [1]. We must await the results of many randomized clinical trials before we adopt the recommendation. Another worthwhile wait is to see the recommendation come into the standard textbooks of surgery. The use of technique, based on certified statistics, is the cornerstone of safe surgery in this ever-changing scenario we practice in.

(d) Critical Scrutiny

This has been the hallmark of my own personal surgical life. As mentioned earlier, from the very first day of my surgical career, I have maintained a personal “Log Book of Operations.” With the advent of computers and appropriate software, this is now very easy. Daily entry, weekly and monthly review, and a yearly analysis help bring a good assessment of performance and shortcomings. A constant effort to improve stems from these findings. Logbooks also bring about an understanding of human frailties and will be a very humbling experience. Honest entry gives very real figures. A personal self-analysis or audit gives the trend of results, and this should encourage measures to cope with the changing scenario.

(e) Checklist Savvy

It is thanks to Atul Gawande and the WHO that checklists are now mandatory before, during, and after all surgical interventions. These reduce “surgical errors” and are now mandatory for accreditation with agencies like the NABH. Checklists and standard operating protocols are yet another requirement for the modern surgeon to be part of, if he or she is to keep in step with the ever-changing scenario in the surgical world.

(f) Case Selection

Advances have occurred not only in surgery, but in all other fields too, and now, surgery is but an arm of

the multidisciplinary approach to patient care. Indications for surgery have changed, so too the mode of surgery. Classic examples are the total absence of elective surgery for acid peptic disease today and the use of diagnostic laparoscopy before committing to a major laparotomy in GI malignancy.

(g) Cost Surveys

The single most definite aspect of economics of surgical care is that costs are always on the rise. We are duty bound to explain costs of surgical care before interventions. These explanations should include periods off work and lack of earnings during this period. It is obvious that the daily wage earner needs a quicker service and return to earning than the employed worker who gets a salary. What we tend to forget are the “hidden costs” of care like the transport and food for relatives of the patient; often, these add up to quite a percentage of the total cost to the patient. It is with this in mind, the now emerging concepts of day care and ambulatory surgery are catching on.

Civic Sensibility

The final part of my perspectives in surgery relates to aspects of personal behavior. Society offers a priority status to all doctors and surgeons in particular. “Surgeons are the fighter pilots of the medical profession,” they say. Civic sensibility is the subtle quality of personal behavior that helps in the “image” and “public perception” of the surgeon.

(a) Cool Self

Surgery is intense and precise. This means the surgeon needs to have complete control of his faculties and his environment. Maintenance of a “cool self” helps get the best of performance from the surgeon himself (or herself) and of the whole team involved. Raving, ranting, and throwing of tantrums and instruments are indeed counterproductive to the final outcome. This relates not only to the setting of the operation rooms, but also in the wards, and with all the interpersonal relationships that are involved with the delivery of surgical care.

(b) Community Service

Ours is an unequal society. Every person has to pay for surgical care. A vast majority cannot afford to do so. A good method of giving back to society for the priority status it affords a surgeon is to engage in periodic surgical service to the community, where a financial compensation is not the prime consideration. The goodwill brought about by such acts is invaluable to the image of the surgeon. My logbooks abound with many instances

where my only reward has been the smile of a cured surgical patient. One patient came home and gave me a bag of playing marbles, because those were what he made for a living. !

(c) Confidentiality Seal

It is imperative to maintain the confidentiality of each and every patient. The trust the patient has in you is implicit. Today’s digital world and information technology boom allow very easy betrayal of confidentiality on social networking sites like Facebook and Twitter. One should not fall into these traps.

(d) Clean Slate

This reflects the ethics of the surgical practice. To be known to operate for remunerative or commercial reasons, to offer percentages for referrals, to charge a fee for a service when one earns a salary for being appointed to perform the job, and stooping to seek financial gain from educational activity are but examples when the slate gets marked unclean. Life is not only about material gain. After all, you opted for the medical profession, which is a service profession. It is therefore necessary that you too keep it a clean service.

(e) Clear Script

A lot of the surgical work requires written documentation. A clear, legible handwriting is a bonus, but the

Table 1 The “C S” perspectives in surgery

A. Common Sense	Communicating Skills
	Concerned Sympathy
	Clinically Sound
	Careful Scalpel
	Combat Stress
	Create Stamina
B. Changing Scenario	Compensation Safety
	Continuing Study
	Cultivate Students
	Certified Statistics
	Critical Scrutiny
	Checklist Savvy
C. Civic Sensibility	Case Selection
	Cost Surveys
	Cool Self
	Community Service
	Confidentiality Seal
	Clean Slate
	Clear Script
	Caring Spouse
	Cheerful Surgeon

clear script I refer to is the complete and accurate documentation. This is best done personally for all operations performed and must entail sufficient detail and reasoning, so that should the unfortunate need of legal scrutiny arise, the documents will form the basis of a safe passage through the courts of law.

(f) Caring Spouse

Life exists beyond surgery. We are social creatures with families and their attendant responsibilities. Behind every successful surgeon is that strong family support. To get this support, one must be the “caring spouse” to your partner. Proper time management must schedule family time. The benefits will be seen in much improved surgical outcomes.

(g) Cheerful Surgeon

It is my firm belief that laughter is a great medicine. Humor has positive influence in all outputs. This humor should be appropriate and never be at the expense of another member in the team. I use humor in every case of local anesthesia hernia repairs that I do, in that, while we wait for the local anesthetic to work, I insist that the team shares a good joke, and then we resume the surgery. Being cheerful is not only about jokes, but also being able to see the lighter side of every situation. It is a form of infective optimism that helps attain very good surgical results. As the general aphorism goes, “If you don’t have a sense of humor, you probably have no sense at all”...!

Table 1 gives the list of the “C S perspectives in surgery.” These are my perspectives of a surgical career. These have been put together by reading through my logs of surgical work, and having read them so often, I was able to, as I had mentioned earlier, “read between the lines.” Logbooks enter the surgical facts, *but between the lines lie the ethos, the passion, the frustrations, the joys, and the hard lessons of the surgical life.*

Adoption of the “C S perspectives” into daily surgical life does result in more “C S” ! There will be a manifold increase in your personal *credit stock* of

- (a) *Craft stability*, which is a proficiency in the field that wins you acclaim of being a competent, safe and humane surgeon.
- (b) *Customer satisfaction*, with patients being happy with the care given. One’s employers (company) will also be satisfied with the results.
- (c) A *cash surfeit*, wherein one’s pockets will never be empty. How full they become will vary with one’s effort, endeavor, and opportunity.
- (d) One will experience *cherished success*. This is the final outcome of the combination of surgical abilities and the “quality of life” skills. It is the inner satisfaction that one has when success knocks, and you are proud of what you have achieved.
- (e) Lastly, you will get a *comfortable sleep*. The “C S” perspectives will assure you of a good night’s rest of a peaceful mind at the end of the day. I leave you with my last aphorism, which states, “In life, our own satisfaction is better than success. This is because success is a measure decided by others, while satisfaction is a measure decided by yourself” !

Before I conclude, I would like to add the final set of “C S” of the article by saying a very big Thank You to my Family, for their *constant support* and encouragement throughout my surgical *career span*. I also thank my Institution, St. Martha’s Hospital, Bangalore, India, for the same. I have tried to present my perspectives to success in a surgical career, with *Complex Simplicity*. I leave you with the over 30 expansions of “C S” that should be a part of a successful surgeon’s career!

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