

MAKING ORTHOPAEDICS FUTURE-PROOF: REFLECTIONS FROM RESIDENCY AND HOPE FOR THE FUTURE

INSPIRATION

‘The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires’ William Arthur Ward

I had always been interested in surgery in medical school, but I only truly became inspired to pursue Orthopaedics during my medical school electives in M4. I did my local elective with Mr Teo Yee Hong at TTSH where I witnessed first-hand how he combined his impeccable patient communication skills with his flawless surgical technique in the operating room doing total knee replacements at a breakneck speed. I subsequently did an overseas elective at the Geriatric Fracture Centre in Rochester, New York under Professor Stephen Kates, one of the pioneers of Ortho-Geriatric fracture care in the world. I was fortunate to witness Ortho-geriatric care at a time when it was still in its infancy in Singapore. My time in Singapore and Rochester taught me the beauty of Orthopaedics – **while simple in its aims to relieve pain and restore function, it was the profound satisfaction in achieving those aims so swiftly and elegantly with the skill of the scalpel which to me was unparalleled to any other field in medicine.**



CHANGING TIMES

‘Change is the only constant’ Heraclitus

The first formal residency programs were established by Sir William Osler and William Stewart Halsted at the John Hopkins Hospital where trainees usually live (or “reside”) on campus due to the long gruelling hours, while receiving minimal pay.

My batch in medical school at NUS was the first “guinea pig” batch whom residency was tested on, and I entered Orthopaedic residency when it just started to take root in Singapore. Residency introduced many new concepts to medical education that were previously unheard of such as duty hours restrictions, post call and single cluster training. We witnessed the backlash of many senior surgeons who felt that the new residency system was too “soft” and would produce substandard and poorly trained consultants.

Even within my time in residency, we have experienced many changes as the system struggled to strike a balance between what has been traditionally a UK-style training system while trying to adopt the US-based residency system. As I reflect on those times, I recognize that residency has indeed brought much good to our training system by creating resident ownership through having a sponsoring institution, establishing a minimum standard of training and removing the unwanted variation in training standards of the past. Being in the same institution for my entire residency training has helped me develop deep and lasting friendships with many of my fellow residents and faculty. While great debate exists whether duty hour restrictions really do impair surgeon training, all I would say is that after a long 36hr overnight call in the hospital, post-call was always a welcomed bonus. Unfortunately, residency has had its shortfalls as well. Despite being in such a small country like Singapore, residency has deeply divided the residents and silo-ed everyone into

their own individual clusters. Other than the occasional SOA Saturday Conferences, the only time I managed to interact with residents from another cluster for any significant period was during my Paediatric Orthopaedic posting in KKH. During those short few months, it was fascinating to gain a different perspective and hear stories from the other side.



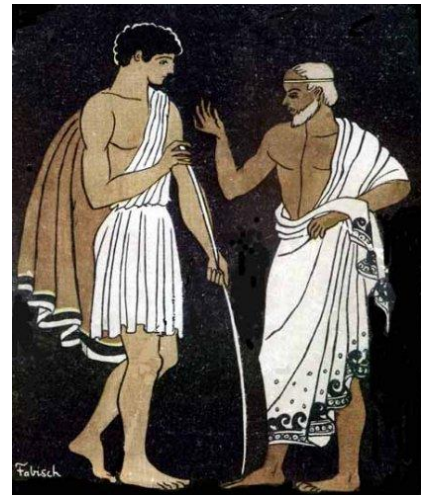
MENTORSHIP

“A mentor is someone who allows you to see the hope inside yourself.....allows you to know that no matter how dark the night, in the morning joy will come..... allows you to see the higher part of yourself when sometimes it becomes hidden to your own view” Oprah Winfrey

The term mentor was first introduced by Homer in the “Odyssey” where Odysseus’s son, Telemachus was encouraged and guided by Mentor to embark on a journey to look for his father after the conquest of Troy.

Despite the evolution of medical training that has occurred over the last century, I have personally found that apprenticeship remains very much at the heart of surgical education. This apprenticeship does not end with the completion of residency but extends well beyond your training years.

I have been fortunate during my residency to have found good mentors along the way, including Mr Ernest Kwek our Programme Director. These mentors have guided my development not only as a surgeon but also in other areas of my career such as research and administration. I believe it is key for every resident to find good mentors to help navigate the choppy waters of surgical training and even beyond as a surgical consultant.



AO FELLOWSHIP

“The passing of the torch to younger students and physicians in training is truly one of the great traditions of medicine” Peter Cole, MD

I was fortunate during my residency to win the Top 10 Best Paper Award at the 2nd AOTrauma Asia Pacific (AOTAP) Scientific Congress and TK Expert’s Symposium in 2014. With the award came a fully sponsored AO fellowship where I could choose any AO centre in the world to go for 6 weeks. While most people only get the chance to experience an overseas fellowship during their HMDP years, I was very fortunate to get a small taste of it early in my residency and that short 6 weeks turned out to be more impactful than I expected.

I did my AO fellowship under Professor Peter Cole, a world-renowned Orthopaedic trauma surgeon with a unique expertise in treating scapula fracture boasting the largest personal series of scapula fixation in published literature. He established the “Scapula Institute”, a tertiary referral centre at

Region's Hospital, Minnesota which does more than 50 scapular or complex shoulder girdle surgeries per year. Region's Hospital itself is a level 1 trauma centre which performs over 12,000 surgical procedures per year.

It was an eye-opening experience to be exposed to an environment where the pursuit of excellence was so ingrained into the culture. Boasting an entire research division with a team of highly motivated research fellows and research assistants, I witnessed first-hand how research ideas were transformed into actual clinical trials and subsequently published in high impact journals which impacted world-wide practice. On the education front, their Orthopaedic trauma fellowship program is still one of the highly sought-after programs having produced many outstanding leaders in the field such as Professor Mohit Bhandari.



However, it also showed me the sacrifice and hard work that had to be invested to achieve such excellence. Combined trauma rounds usually began at 6am but the surgeons were often in hospital well before that doing their rounds. Professor Cole himself routinely came to work at 4am, even earlier than most of the interns on regular days. I still vividly remember receiving a call from the fellowship coordinator at 9pm one night informing me that Professor Cole was giving a teaching to the fellows at 5am the next morning and inviting me to join in.

THE FUTURE

"When the winds of change blow, some people build walls and others build windmills" Chinese proverb

"The future belongs to those who believe in the beauty of their dreams" Franklin D. Roosevelt

As I come to the end of my residency years and look back at these key milestones, I reflect on the changing climate of medicine and Orthopaedic Surgery. From the rapidly spiralling exorbitant healthcare costs to the increasingly litigious practice environment. From the constant advancing technology to the shift in the role of the surgeon from master clinician to a team leader, merely a cog in today's complex world of care delivery. We have experienced more changes in this short period of time than most other healthcare systems would have seen in an entire generation.

In light of all this, we have to ask the questions. What kind of Orthopaedic surgeons do we want to produce? How do we future proof the surgeons of tomorrow? Looking back now, what did I wish that this residency had prepared me for?

ACGME lists down the 6 core competencies of practice-based learning, patient care, system-based practice, medical knowledge, communication skills and professionalism that every resident is expected to acquire. People often talk about developing the all rounded resident, one who not only is outstandingly clinically but one who shines in all other aspects such as research, education and administration. While there is certainly much truth in the above, ultimately I believe it boils down to 4 main qualities. **Adaptability, Dedication, Giving back and Purpose.**

Firstly, **adaptability.** Adaptability is defined as capacity to adjust to new conditions. 2 key factors contribute to being adaptable. Firstly, being informed and secondly, resilience. Bring informed and

aware of what is going on in the world and particularly to us, the world of healthcare is key to be being adaptable. Resilience defined as the capacity to recover quickly from difficulties. In this world where change is the only constant, being informed, resilient and ultimately adaptable will ensure that we will always remain relevant.

Secondly, **dedication and the pursuit of excellence**. My time during my AO fellowship has showed me what the relentless pursuit of excellence truly meant. Inside each and everyone one of us exists a great untapped potential to bring Orthopaedics to greater heights. Find a good mentor, surround yourself with like-minded people, work hard and never settle for anything less than your true potential. You might be surprised what you can achieve!

Thirdly, **giving back**. Seek to give something back either through community work for the less fortunate and marginalized patients in our society or through educating our juniors under us and grooming the next generation of Orthopaedic surgeons. While it is very easy to grow insular in achieving our own personal ambitions and goals, remembering the patients and senior doctors who have sacrificed for us to be in the position we are in today reminds us that we did not get here through our efforts alone. You never know when you will provide that life changing inspiration to a bright eyed and bushy tailed medical student who timidly asks to join your clinic one of these days.

Fourthly and underpinning it all is **purpose**. Remember the purpose of why you first came into medicine and Orthopaedic Surgery in the first place. Medical students often proudly say in their interviews that the reason why they want to do medicine was because they wanted to “save the world” and “make a difference”. Often time after many years of medical school and residency, this child-like desire is often drowned out and beaten out of you by the pressure of work. **Remembering and holding onto that purpose is what ultimately will help you keep that passion alive as you continue serve your patients and make that difference!**