

Life in the Fast Lane

– Interview with Prof V Anantharaman, Clinical Prof Goh Siang Hiong and Clinical A/Prof Eillyne Seow

There is no other speciality in which the saying “every second matters” is more true than emergency medicine (EM). Every decision made in this fast-paced environment leaves an indelible impact on all who pass through the department, and it could make all the difference between life and death. *SMA News* is thus pleased to have three esteemed emergency physicians – **Prof V Anantharaman (VA)**, **Clinical Prof Goh Siang Hiong (GSH)** and **Clinical A/Prof Eillyne Seow (ES)** – share with us their careers in EM, and their hopes and dreams for future generations of emergency physicians.

Prof V Anantharaman

Prof V Anantharaman is a senior consultant at Singapore General Hospital's (SGH) Emergency Department (ED), clinical professor at National University of Singapore and adjunct professor at Duke-NUS Medical School. He chairs Singapore's National Resuscitation Council and is immediate past president of the College of Emergency Physicians, Singapore. He is also a member of the Singapore Medical Council. Prof Anantharaman was head of SGH's ED from 1994 to 2003; founding president of the Society for Emergency Medicine in Singapore and also the Asian Society for Emergency Medicine. For many years, he chaired Ministry of Health's Emergency Medicine Services committee and the Medical Advisory Committee for the Ministry of Home Affairs. He was awarded the Order of the International Federation for Emergency Medicine in 2004.

Clinical Prof Goh Siang Hiong

Clinical Prof Goh Siang Hiong is the president for the College of Emergency Physicians Singapore. He is also a past president for the Society for Emergency Medicine in Singapore. He has an interest in medical informatics and medical gadgets.

Clinical A/Prof Eillyne Seow

From March 1995 to March 2015, Clinical A/Prof Eillyne Seow held the following posts at Tan Tock Seng Hospital: Deputy Head and Head, Emergency Department; Assistant Chairman Medical Board (Clinical Development); and Divisional Chairman (Ambulatory and Diagnostic Medicine). She was awarded the Medal of Valour for the Singapore National Day Award in 2003 and the National Health Group's Distinguished Achievement Award in 2012.

She joined Khoo Teck Puat Hospital's A&E department in July 2015.



Back in those days, emergency medicine (EM) was not yet a recognised medical specialty. What influenced your decision to specialise in EM?

VA: In the mid-1980s, I was invited by the late Dr Lim Swee Keng, who was then head of the emergency department (ED) at Singapore General Hospital (SGH), to join his department as a registrar. This was shortly after I had obtained my MRCP (UK). I had previously worked at SGH's ED as a medical officer (MO) and had often complained to him about our inability to do much for patients. In those days, we were only allowed to do very minimal investigations and treatments such as ECGs, plain X-rays and applications of backslab.

Credit must go to Dr Lim for his foresight and agreement to open up selected investigative and treatment resources in the ED, and he asked me to join the department to help him make the change in the nature of care being provided. Many of my friends asked me to reconsider joining the ED because EM was not yet a recognised medical discipline in Singapore. After carefully considering the potential for pushing boundaries to improve emergency care, I agreed to join Dr Lim and entered EM as a career.

Since I was trained in internal medicine (IM), Dr Lim arranged for me to do a general surgery posting under the mentorship of Prof Raj Nambiar at SGH. Subsequently, I took leave and spent some time at the ED of the Royal Infirmary of Edinburgh as an unpaid registrar under the



tutelage of Dr Keith Little, the head of department (HOD) and convenor of the FRCS Ed (A&E) examinations.

ES: During my first houseman posting in 1985, in the then Medical Unit III at Tan Tock Seng Hospital (TTSH), Prof Poh Soo Chuan, the HOD, asked three of us housemen what we intended to specialise in. One of my friends said paediatrics, the other said surgery and I answered, "A GP". There were a few giggles in the group but Prof Poh waved them aside and commented, "She may be making the best choice." However, in my first MO posting in TTSH's Orthopaedics, I met Dr Jimmy Yeoh, an EM trainee. It was then that I discovered that EM is a discipline that I would never be bored in for there would always be new horizons to conquer.

GSH: I was previously an IM trainee and it was during one of my rotations back in the 1990s that I met Dr Lim Swee Han, one of the first few EM trainees in Singapore, who later became a good friend of mine. He told me about this new field and it seemed to me that it was quite an exciting new specialty. Although internal medicine was broad-based and had intensive care unit rotations as well, I was also sad to have to give up my knowledge in orthopaedics, paediatrics and surgery. After a posting in SGH's ED, I was convinced that it was a really promising and exciting field. With permission from the Ministry of Health (MOH), I made the switch to EM.

What were some major changes that the EM has gone through over the course of your careers, be it in clinical, teaching or administration aspects?

VA: In the more than 30 years that I have spent in EM, we have indeed made much progress. For example, soon after SGH initiated the first Advanced Cardiac Life Support (ACLS) course in late 1985, we were successful in having every doctor posted to the various EDs certified in both Basic Cardiac Life Support

(BCLS) and ACLS. Within a few years, the then head of cardiology at SGH remarked that the standard of resuscitations done at the ED had improved tremendously and that patients collapsing while being sent to the wards had become a rare sight.

Perhaps the area of clinical service with the greatest impact on outcomes has been emergency cardiac care. There was close collaboration with the then Department of Cardiology (now the National Heart Centre) in developing protocols for the management of emergency cardiac conditions. This collaboration has resulted in landmark scientific papers in the management of conditions, such as supraventricular tachycardia, that have influenced international guidelines, and in the introduction of thrombolytic therapy for patients with acute myocardial infarction. Other efforts include reducing door-to-balloon times for patients who require percutaneous coronary interventions in Singapore, and introducing therapeutic hypothermia for patients with return of spontaneous circulation.

Other major changes that have occurred in clinical practice in the ED include the introduction of specific treatments for poisoned patients presenting to the ED and in the development of emergency observation medicine, which has led to more judicious admissions. We developed areas of emergency trauma care by working closely with the trauma service, and introduced the use of focused emergency ultrasound and CT scans within the ED in 1998. In addition, training in management of the airway has been led by the current SGH ED head, Dr Evelyn Wong. These changes that were started in the 1990s have all led to significantly improved diagnostics and management.

In 1989, we started the first Specialist Training Committee (STC) in EM. I had to obtain the assistance of some of the stalwarts in medicine from a variety of hospitals to be members

of this STC. I wish to thank Prof Chia Boon Lock (National University Hospital), Prof Low Cheng Hock (TTSH), Prof Ng Han Seong (SGH) and Dr Wong Ho Poh (TTSH) for having assisted me.

EM was one of the first disciplines to have a structured post-graduate training programme with log books that were periodically reviewed by the STC. In 2001, the STC introduced the MMed (EM), in collaboration with the Academy of Medicine, Singapore (AMS), and the Graduate School of Medical Studies at the National University of Singapore. The examinations were initially organised with the Royal College of Surgeons of Edinburgh and later, with the College of Emergency Medicine in the UK. In 2014, we started our own independent MMed (EM) examinations which are now conducted twice a year.

Research was not conducted when I first started out in EM. The earliest organised EM research projects in Singapore were carried out at SGH in the late 1980s and were on better ways to manage patients with bronchial asthma. Today, senior

members of the profession are associate editors or members of editorial boards of reputable peer-reviewed international journals in the field of EM. Research teams that have sprung up within EM in Singapore are now leading major international projects, such as the Pan-Asian Resuscitation Outcomes Study, and are also involved in major international research committees such as with the International Federation for Emergency Medicine (IFEM).

Singapore also became the first country outside of the four founding members of IFEM (the UK, the US, Canada and Australia) to organise the International Conferences on Emergency Medicine in 2010, and this major research and educational effort has earned Singapore respectable recognition in the international EM scene as having one of the best mature EM programmes in the world.

ES: Over the last three decades, the landscape of EM practice has changed as much as that of Singapore's skyline. When I first started as an MO, the heads of the EDs were non-emergency physicians

(EPs), and were often orthopaedic surgeons. Today, the EDs are all helmed by a consultant EP, with EPs on the floor 24/7.

GSH: Our patient demographics are also changing; we see an increasing amount of geriatric conditions such as strokes, ischaemic bowels, elderly sepsis and malignant conditions. Sometimes, we even have to practise palliative care in the ED. Also, with the improvements in specialty training, our residents are much better trained than ever.

The standard of EM practice varies greatly all over the world. Where did you do your Health Manpower Development Plan (HMDP) and what were the greatest lessons during your fellowships?

ES: My first HMDP from August 1990 to July 1991 took place in two different centres in the UK. In the first, I saw how excellent clinicians were equipped to give great care; while in the second, I saw how excellent clinicians struggled to give safe care. My second HMDP from July 1994 to January 1995 saw me riding with one of the best emergency ambulance



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teams in the US. I learnt that the pre-hospital teams have it rougher than us physicians who practise in an ED. It was also the first time I attempted to perform intubation on the street – the patient had been shot in the head in broad daylight.

On “9/11”, a friend from Singapore called me when I was on my third HMDP in Ann Arbor, Michigan, US, while I was on an attachment with the risk management guru of EM, Dr Greg Henry. “World Trade Centre has been bombed!” she said. “Huh?” I responded, wondering why anyone would want to attack World Trade Centre next to Sentosa. At that point, I was due to change posting within the next few days to study observational medicine in Connecticut, a 12-hour drive away. Fortunately, the skies opened and I could fly as scheduled.

VA: I did my HMDP in Israel and it was the first HMDP fellowship for further training in EM outside of the old basic specialist training programme. There, I learnt that we need a national organisation to bring together all EPs to espouse and lead the cause of good emergency care for our patients. It is also important to be well organised with good clinical care protocols and working with other



clinical departments to advocate for and advance the care of emergency patients in a collegial manner for the good of these common patients.

Towards this end, we formed various organisations such as the Society for Emergency Medicine in Singapore in 1993, as well as the Chapter of Emergency Physicians in 2007 within the AMS, which became the College of Emergency Physicians in 2014. The College now has more than 100 members. In 1998, Singapore initiated and led the formation of the Asian Society for Emergency Medicine.

Over the years, I have also viewed many systems of emergency care around the world. It is often felt by many that we lack knowledge in emergency planning and emergency care, but few realise that we have a system of quality emergency care provision that is very comprehensive and almost second to none. We have also developed a large group of young and very talented EPs in the country, who if appropriately empowered, can work together to push Singapore right to the forefront of EM development.

Indeed, we have high hopes that our younger EM colleagues will step up to bring the specialty to greater

heights. In your opinion, what are the current challenges that EM faces and what future developments do you hope to see?

GSH: The current challenges are well known, from rapid ageing of the population to access block. Fortunately, the government is coming to grips with these problems. I think we can see a bigger role for general medicine specialists and geriatricians, family medicine practitioners and also general surgeons, with less emphasis on specialisation. I also hope to see nurses and allied health professionals being allowed to take on more responsibilities in patient care as well as roles in clinical leadership. This will also help in right-siting care for patients in the community and help devolve care away from doctors.

Other than that, important things that I can see coming are the increasing use of medical robotics in ED care, wearable monitoring devices for patients, and medical informatics devices that help doctors and nurses make critical decisions at the bedside.

VA: Indeed, there is very good evidence that ED overcrowding leads

to a number of adverse outcomes for patients and no patient of ours deserves to wait for an inpatient bed. Other challenges to tackle are the creation of an integrated approach by the health services to address the access block issue, building up a strong cadre of trained EPs well skilled in the service needs, training future generations of medical practitioners in initial emergency care and using research as the basis for learning better how to guide the care of their future patients. This should result in a consultant-led and consultant-based service that gives us the ability to ensure that every patient coming into the various EDs will be at least reviewed by a trained EP before final disposition.

I hope we develop a training system that we can call our own, without copying but learning and working with other Asian countries in creating a strong Asian/regional EM training and assessment system.

In your career thus far, who were some of your key mentors?

VA: The late Prof Seah Cheng Siang, who was the head of Medical Unit III at SGH, taught me the value of good clinical history taking, systematic physical examination, and rational basis for investigation and treatment of patients. My predecessor as head of the ED at SGH, the late Dr Lim Swee Keng, taught me the value of humility, listening and working in a team, regardless of differing perspectives.

ES: The first of many who were happy to guide me was Prof Chee Yam Cheng, whom I met during my first houseman posting. I learnt administrative skills from Dr Tham Kok Wah, former director of Medical Affairs, TTSH; while Mrs Kang Gek Inn, former manager of Patient Relations Services, TTSH, taught me how to investigate and manage feedback. In my work with the international EM community, Dr Albert Yip Sai Hang from Hong Kong, Dr Wang Lee-Min from Taiwan and Prof Colin Robertson from

Scotland provided me with different perspectives.

GSH: From my days in internal medicine, there was Prof Ng Han Seong, Prof Chee Yam Cheng and Dr Roland Chong. Later, as I began my EM practice, I learnt a lot from Prof V Anantharaman, Clinical A/Prof Eilayne Seow and my immediate HOD, Prof Low Boon Yong. All of them taught me many skills, both clinical and administrative, and I learnt from them values such as tact, integrity, humility and resilience. I also had many interesting peers like A/Prof Mark Leong, A/Prof Tham Kum Ying, A/Prof Mohan Tiru, Dr Lee Wee Yee, Dr Lee Shu Woan and A/Prof Shirley Ooi. Nowadays, I also find that I learn a lot from my younger colleagues, all of whom are brimming with enthusiasm and new knowledge.

What advice would you give to a young budding EM trainee, be it a medical student or junior resident?

GSH: If you like to be a generalist, with lots of procedures and critical care, this field is for you. It is a good field for mothers and those with family responsibilities. However, you must be resilient and learn to balance work with family, so as to avoid burnout. There are many fields you can further grow into (besides our EM subspecialties), such as education, research, risk management, medical informatics, clinician leadership, and international medical and academic collaborations. Self-renewal is the key. Also, the imperfect nature of our EM practice can sometimes lead to missed diagnoses and misdiagnoses; you have to know that this is not your personal fault. Be gentle on yourself!

ES: EM is a tough road to take. It may look glamorous to a young person, but it requires resilience and the ability to accept uncertainties. However if you can persevere, you will rarely be bored!

VA: The opportunities for development in EM are tremendous. EM provides opportunities for one to see a patient getting better in front of them. The

work is hard and the remuneration may not be great, but the joy and benefit you bring to others will be significant. What greater privilege can there be for a doctor?

As EM physicians running shifts, your work schedule must be quite irregular. Outside of work, what are some of your hobbies and interests? What would you like to do if you had six extra hours a day?

VA: Outside of work, my family is my greatest source of joy and comfort. My grandson is fantastic to be with. My sons and daughter inspire me constantly to do my best, and they are amazing children. My wife is a tremendous source of strength and support. I also work with various community groups to help those whose ability to manage their daily situations can be improved because I can teach them relevant skills and

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provide the necessary advice. Brisk walking is currently my main form of exercise.

GSH: I try to spend as much time as possible with my children and family members. Besides running and reading, I also keep hamsters, download and watch a lot of TV comedies, and play about with technological devices. I enjoy food a lot more than I should. I would like to travel more often too.

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ES: I read, travel, write, watch Korean shows and meet friends (not in order of frequency) to prevent burnout, but I wish I had more time to 品茶 (*pin cha* – drink tea slowly and appreciate it) with friends.

Writing has been a cathartic experience for me. I write to remember people and events that have left an impression on me. The last book that I published, *The Newspaper That Lines the Bottom of a Bird Cage and Other Stories from the Emergency Department* was also written to share the world of the ED with those who have little or no contact with it. It is my tribute to the warriors of EDs and to the patients we have been privileged to care for. ♦

For the full transcript of this interview, please visit <https://goo.gl/iVKPsX>.

Legend

1. Prof Goh teaching his trainees how to use the Glidescope
2. Prof Anantharaman (extreme left) and attendees of the official inauguration of College of Emergency Physicians
3. Prof Goh (top row, first from the left) with Changi General Hospital's emergency department members during an end-of-posting dinner
4. Enjoying a cup of good tea and having the opportunity to write helps Prof Seow to unwind
5. A/Prof Seow taking time out in England

