Life in the Fast Lane

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 (EPs) – **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 EPs.

List of interviewees

- 1. Prof V Anantharaman
- 2. <u>Clinical Prof Goh Siang Hiong</u>
- 3. <u>Clinical A/Prof Eillyne Seow</u>

Prof V Anantharaman

Prof V Anantharaman is a senior consultant at SGH's 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 Singapore General Hospital'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.

Back in those days, 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 ED at 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 the following:

- 1) Take a clinical history from the patient
- 2) Carefully examine the patient and document our findings
- 3) Perform the following investigations: ECGs, urine dipstick tests, stat capillary blood sugar tests and plain X-Rays. We were not allowed to do any other investigations.
- 4) Treat patients by setting IV drips, reducing fractures and dislocations, applying splints and backslab, doing resuscitations and prescribing a standard list of medications.

We had frequently discussed the need to be able to judiciously order useful standard blood investigations and also other investigations that would aid in making a rapid diagnosis and assist in the initial management of the patient. We did not want to simply admit patients ad-lib into the hospital and fill up hospital beds.

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 and help him make the change in the nature of care being provided.

I could see then that a lot needed to be done in the ED to improve the quality of care. Many of my friends asked me to reconsider joining the ED because EM was then not yet a recognised medical discipline in Singapore. They also mentioned that "only orthopaedic surgeons would join the ED". There were no EPs in Singapore then – just MOs and department heads. After carefully considering the potential of pushing boundaries to improve emergency care, I agreed to join Dr Lim and entered EM as a career. Soon after, the Ministry of Health announced the recognition of EM as a medical specialty in Singapore. The credit for getting the discipline recognised must surely go to the late Dr Lim.

Since I was trained in internal medicine (IM), Dr Lim arranged for me to do a posting in general surgery 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, then head of that department and the convenor of the FRCS Ed (A&E) examinations in the UK. I returned to the ED at SGH with valuable lessons learnt during these attachments.

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

VA: Over more than 30 years that I have spent in EM, some of the changes that have occurred are as follows:

Clinical service

- 1) One of the first changes brought into the service was the introduction of new investigative modalities such as the full blood count, renal panel, prothrombin time/activated partial thromboplastin time tests, group and cross match tests, liver function tests and cardiac biomarkers. For many years, we closely monitored the use of these blood investigations by our doctors at the ED. We repeated our desire for them to not be routine tests but instead ordered judiciously to assist in initial diagnosis and management. To this day, we continue to subscribe to the same philosophy that there should not be any routine tests done, that the doctor must have a good reason for ordering any blood test, and that we should practise thinking medicine. Over the years, the variety of investigative modalities available at the ED has increased tremendously to assist in rapid diagnosis and early management.
- 2) Soon after SGH initiated the first Advanced Cardiac Life Support (ACLS) courses in late 1985, we were successful in having every doctor posted to the ED certified in both Basic Cardiac Life Support (BCLS) and ACLS. This resulted in a significant improvement in the quality of resuscitations done at the ED. 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 were a rare sight, compared to before such training had been introduced. This gave recognition to the tremendous efforts being made at the ED to improve the provision of emergency care to the sick and injured presented to us. EPs, not only at SGH but also at all public hospitals, lead the efforts in BCLS and ACLS training at all major hospitals in Singapore.
- 3) We worked closely with our colleagues in IM and paediatrics to standardise the care of poisoned patients, and introduced initial gastrointestinal decontamination and early antidote use for patients while at the ED. It was ensured that poisoned patients had the initial work-up completed before they were sent to the wards. Over the years, this has led to great interest in toxicology among EPs. Since then, a number of EPs from SGH and the other hospitals have gone on to do overseas fellowship programs in toxicology and are now leading the development of toxicology as a growing discipline in Singapore.
- 4) Perhaps the area of clinical service with the greatest impact on outcomes has been emergency cardiac care, with close collaboration with the then Department of Cardiology (now National Heart Centre) in developing programmes and protocols for the initial management of a variety of patients suffering from cardiac arrhythmia and myocardial

infarction. This collaboration has resulted in landmark scientific papers in the management of conditions such as supraventricular tachycardia that have influenced international guidelines on this condition, and in the introduction of thrombolytic therapy given for heart attack patients in the ED during the 1990s, the later successful efforts to reduce door-toballoon times for such patients with percutaneous coronary interventions in Singapore, and the efforts in introducing therapeutic hypothermia for patients with return of spontaneous circulation.

- 5) The development of emergency observation medicine has been another major event that has led to more judicious admissions and better management of patients in the ED, with evidence-based protocols that have resulted in decreasing the number of so-called "unnecessary admissions" from the ED into the hospital. This service will, in the long run, play a major role in better ensuring that the quality of patient care provided at the ED is improved for a wider variety of patients who present to us.
- 6) Other major changes that have occurred in clinical practices in the ED have been in the area of emergency trauma care: working closely with the trauma service; the management of the emergency airway that has been led by the current ED head, Dr Evelyn Wong; the introduction of focused emergency ultrasound in the ED done by EPs trained in these skills; and the introduction of CT scanning within the ED in 1998. These changes that were started in the 1990s have all led to significantly improved diagnostics and better management of the vast array of ill and severely injured patients who present to us.

Teaching

- In 1985, we began centralised and organised structured training programmes for all doctors being posted to the various EDs in Singapore; done twice annually for the two weeks before the doctors were posted to the various EDs. These programmes continued for the next 15 years until they were decentralised to the various hospitals in the early part of this century. These training sessions had a major role to play in the development of regular teaching programmes within the EDs in the country.
- 2) In 1989, we started the first Specialist Training Committee (STC) in Emergency Medicine. Since there were no other ED-trained consultants in the service, 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 (Tan Tock Seng Hospital), Prof Ng Han Seong (SGH) and Dr Wong Ho Poh (TTSH) for assisting me. For the first few years, centralised post-graduate training programmes were conducted every two weeks at my department before it gradually became decentralised with the addition of more trained EPs to the workforce. EM was one of the early disciplines to have a structured post-graduate training programme with log books which were periodically reviewed by the STC. The STC also developed the country's first structured Advanced Training Programme in EM complete with log books, and organised the exit examinations for many years until the setting up of the Residency Advisory Committee (EM) a few years ago. Trained EPs have now taken over the committees that oversee EM training. In 2001, the STC (EM) introduced the MMed (EM) in collaboration with the Academy of Medicine, Singapore (AMS), and the School of Postgraduate Medical Studies (National University of Singapore). The examinations were initially organised with the Royal College of

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Surgeons of Edinburgh and since 2009, with the College of Emergency Medicine (UK). In 2014, we started our own independent MMed (EM) examinations and have been conducting these twice annually since. Specialist training in EM has come a long way. From scratch, we have now 156 trained EPs on the Singapore Medical Council's register and about a hundred in training.

3) We worked closely with our nursing colleagues to introduce the first Advanced Diploma in Nursing (Emergency) in 1995, in collaboration with Nanyang Polytechnic. This programme has, over the years, trained a few hundred emergency nurses in the various aspects of emergency nursing and helped bring the care of emergency patients at the various EDs to new heights.

Research and development of the science of EM

- 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. Local scientific publications in the field of EM date from this era, and over the years, we have seen an increasing number of our publications in local and international scientific literature. 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.
- 2) The research activities conducted in EDs have been not only in single EDs but also with local or major international institutions. 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).
- 3) As a result of the strong efforts made in the early years of development of the discipline, 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 Conference on Emergency Medicine 2010, which had a record participation. This major research and educational effort has earned Singapore respectable recognition in the international EM scene as having one of the few mature EM programmes in the world.

Pre-hospital Care

- 1) Professional care provided by our Emergency Ambulance Services (EAS) was previously managed by the Singapore Fire Brigade till 1989 and since then by the Singapore Civil Defence Force under Emergency Medical Service. In 1997, a Medical Advisory Committee, led by EPs, was formed under the auspices of the Ministry of Home Affairs. This committee introduced the Paramedic Scheme to the EAS, developed all the emergency care protocols used by the ambulance crew and worked towards making our pre-hospital care service one of the best in Asia.
- 2) The members of the discipline continue to provide much needed oversight to the care provided in emergency ambulances. EPs have also introduced a variety of care programmes into emergency ambulances which have significantly improved outcomes of emergency

patients managed by EAS. Some examples of the programmes introduced by emergency physicians into the EAS are fast-response motorcycle-based paramedics (a first in Asia); ECG transmission from the ambulances to receiving hospitals that has helped reduce door-to-balloon times for heart attack patients; and the use of mechanical CPR in the ambulances which has helped improve survival rates of cardiac arrest patients in the country.

Disaster management

- 1) The collapse of Hotel New World in 1986 led to a complete revamp of the health services response plan for the management of civil disasters in the country. This revised plan was drawn up by EPs. The revised plan after the Hotel New World era continues to form the basis of the current national health services' disaster management plan. This plan has been used successfully in the management of a number of incidents that have occurred since then. EPs were also instrumental in creating the first comprehensive plans for preparation of hospitals and their management in times of national emergency.
- 2) EPs have played a major role in the management of regional disasters over the last 26 years, ever since the earthquake in Philippines' Baguio City in 1990. EPs have led many disaster teams to regional disaster sites and are actively involved in the preparation of hospitals for a variety of civil disasters. On the international arena, we are also involved in the conduct of structured disaster medical management programmes of countries in the region and have also been actively involved with international organisations with a keen interest in disaster management, such as the World Association for Disaster and Emergency Medicine.

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?

VA: The main lessons learnt from my HMDP in Israel were as follows:

- 1) There was a need for a national organisation to bring together all EPs to espouse and lead the cause of good emergency care for our patients.
- 2) There was a need for EPs to lead the conduct of good professional care in the emergency ambulances of the country. This has been realised as described earlier.
- 3) There was a need for EDs 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.
- 4) There was a need for systematic development of a variety of areas of interest within the discipline of EM to push the boundaries of emergency care.

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. Our seniors often defer to international views on many aspects of emergency medical care. Few realise that we have a system of quality emergency care provision that is very comprehensive, of a very high quality and almost second to none. We have also developed a large group of young and very talented EPs in the country, who have been very well trained and, if appropriately empowered, can work together to restructure emergency care provision and further push Singapore right to the forefront of EM

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development. However, it is also true that we often are blind to the talent that lies within our group and tend to believe more in the views from the traditionally more advantaged communities.

Following a successful HMDP fellowship, the following have been carried out:

- In 1993, we formed the Society for Emergency Medicine in Singapore. This society organises annual scientific meetings that bring together all in the discipline and also attracts a good attendance from like-minded persons in the Southeast Asian region. In 1998, Singapore initiated and led the formation of the Asian Society for Emergency Medicine. Eps from Singapore continue to play an active role in the Asian Society for Emergency Medicine.
- 2) In 2007, we created the Chapter of Emergency Physicians within the AMS. In 2014, this became the College of Emergency Physicians, which now has more than 100 members.
- 3) Many areas of interest have developed within the discipline of EM in Singapore. Some of these include: emergency cardiac care, emergency trauma care, pre-hospital emergency care, disaster medicine, toxicology, emergency paediatrics, geriatric EM, emergency observation medicine, emergency airway management, emergency imaging and emergency critical care.

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?

VA: The major service challenge is the current access block situation that exists in almost all our public hospitals which results in patients who require inpatient hospitalisation having to wait in the EDs for quite a few hours before they are taken to their inpatient beds. It is the major cause of ED overcrowding in the country and there are many factors that lead to this. There is very good evidence that ED overcrowding leads to a number of adverse outcomes for patients. There is a real need to address the issue of access block in the country as no patient deserves to wait for an inpatient bed if he/she truly deserves inpatient care. What is needed is a wholesome approach to the access block issue. The opportunities for collaborative work on the part of various sectors of the healthcare community to address this are tremendous. These are some of the future developments that I hope to see:

Creation of an integrated approach by the health services to address the access block issue.

- 1) Building up a strong cadre of trained EPs who are well skilled in the service needs, training future generations of medical students and EPs, and using research as the basis for learning how to improve 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 to the various EDs will be at least reviewed by a trained EP before final disposition.
- 2) Evolving 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.

3) Evolving a public emergency management system for major medical emergencies that include a strong first responder bystander element, a responsive and timely emergency ambulance service and the ability to initiate definitive emergency care as early as possible into the disease management process for the sick and the injured.

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 in the 1970s and 1980s, taught me the value of good clinical history taking, systematic physical examination, and rational basis for investigation and treatment of patients. Additionally, 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 and approaches.

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

VA: EM is still a very young discipline in Singapore. We need many more EPs to lead the way and open up more avenues for treatment of the wide variety of patients we encounter in daily practice. The opportunities for development are tremendous. There is no other discipline in Singapore which provides the opportunity for one to see a patient getting better in front of them, and the satisfaction this brings is tremendous. 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 provide the necessary advice. Brisk walking is currently my main form of exercise.

Clinical Prof Goh Siang Hiong

Clinical Prof Goh Siang Hiong is an EM senior consultant specialist and is currently the Director for Medical Education at Changi General Hospital. He has a deep interest in EM medical education. He is presently an instructor for BCLS, ACLS, ITLS, ATLS (Provider & Instructor courses), HazMat Life Support and Fundamental Critical Care Course. He has been awarded Best Teacher for Ambulatory Disciplines and also the SingHealth GCEO Excellence award for Medical Education.

Prof Goh is the President for the College of Emergency Medicine of Singapore. He has also been President for the Society for Emergency. He has an interest in medical informatics and medical gadgets.

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

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. I've always liked to be a broad-based clinical expert, but I am also keen to be involved in critical care and performing practical procedures. Although IM was broad-based and also had intensive care unit (ICU) rotations as well, I was also sad to have to give up my knowledge in orthopaedics, paediatrics and surgery. However, I thought I would give EM a try. 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.

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

GSH: I did my HMDP in emergency trauma care in Cincinnati, Ohio, in 1996. I had gained an understanding of how trauma resuscitation was done in the US, and it was also at that time that advanced trauma life support (ATLS) and basic trauma life support (BTLS) were both introduced to Singapore. Thus, I came back with trauma resuscitation skills that I put into practice at the Toa Payoh Hospital's ED. I also became an instructor for both ATLS and BTLS, and worked with other bodies in Singapore that had an interest in trauma care.

Besides trauma, I also gained an understanding on how EM residents in the US were trained. It gave me an idea of how EM training in Singapore could develop, combining the best of what we had learnt in US, UK and other parts of Europe. Not only were the residents trained in EM practice, but they were also introduced to academic research techniques and ED administration. Even new knowledge about clinical quality and audit were imparted. Ultrasound was also beginning to be used in the ED. All this stood me in better stead to set up the new ED in Toa Payoh Hospital. So I would say that one important lesson is to keep evolving to better ourselves as clinical teachers for EM.

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

GSH: There were quite a few from my days in IM; there were 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 Eillyne Seow and my immediate Head of Department, 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 them brimming with enthusiasm and new knowledge.

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

GSH: There are three:

- 1) The incredible amount of diagnostics that is available now in the ED: 24-hour CT scans, easy availability of bedside ultrasound and more laboratory tests than ever before. However, we have to be careful how we use these resources. We should use more evidence-based guidelines when ordering investigations.
- 2) The increasing amount of geriatric conditions such as strokes, ischaemic bowel, elderly sepsis and malignant conditions. Sometimes, we even have to practice palliative care in the ED.
- 3) A much more structured EM residency. Residents are much better trained than ever.

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. It shouldn't be that doctors are so specialised that they focus only on a small part of the body or a particular niche alone. 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, with the appropriate recognition. This will also help in right-siting care for patients in the community and 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.

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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, then 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. Always cultivate new interests and know that 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!

As EM physicians running shifts, your work schedule must be quite irregular. Outside of work, what are some of your hobbies and interests?

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.

Clinical A/Prof Eillyne Seow

From March 1995 to March 2015, Clinical A/Prof Eillyne Seow held the following posts at TTSH: 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, EM was not yet a recognised medical specialty. What influenced your decision to specialise in EM?

ES: During my first houseman posting in 1985, which was in the then Medical Unit III at TTSH, Prof Poh Soo Chuan, the head of department, 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. I then discovered that there is a discipline that I will never be bored in for there would always be new things to learn and new horizons to conquer.

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

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-EPs; they were often orthopaedic surgeons. Today, the EDs are all helmed by an EP, with EPs on the shop floor 24/7. The management of patients in EDs is no longer one of "scoop and run". Today, ED patients are treated, stabilised and often diagnosed in the ED. Take for example a case of simple pneumothorax – previously, these patients were admitted to the wards before the chest tube is inserted; but now, the condition can be watched or aspirated in the ED, or we could have a chest tube inserted, observed and reviewed in a short stay ward run by EPs. The philosophy of care has shifted from one of treat and dispose to diagnose and manage.

A few of the challenges we face today are old ones like bed block and rising expectations. The new challenges are an ageing population and how far we can or should expand the roles of EPs.

Advancements in medicine will have an impact on the latter issue.

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

ES: I have been given opportunities to practise in a few centres.

My first HMDP from August 1990 to July 1991 took place in two different centres in the UK. In the first, I saw how a system allowed clinicians to give great care; while in the second, I saw a system where 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 teams in the US. I learnt that the

pre-hospital teams have it rougher than those of us 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.

I will always remember where I was during "9/11". A friend from Singapore called me when I was on my third HMDP in Ann Arbor, Michigan, US. I was then 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. It was a very sombre time in the US then. 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.

In your career thus far, who were some of your key mentors? What advice would you give to a young budding EM trainee, be it a medical student or junior resident?

ES: During my journey, I am privileged to have met many who were happy to guide me. The first was Prof Chee Yam Cheng whom I met in my first houseman posting. I learnt administrative skills from Dr Tham Kok Wah, former director of Medical Affairs, TTSH; and 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 the different perspectives. 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.

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?

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 or while reading a book. Another thing I would like to do with extra hours in a day is to "stare at the sea".

You have published a couple of books over the span of your career. Would you like to share with us your inspiration for writing these books?

ES: 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 Birdcage 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.