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In Search of Future Role Models in Medicine

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INTRODUCTION

The study of medicine is not only the study of the human body and its afflictions. It includes the study of man himself. We need doctors who are able to take care of people's general health needs, doctors who are able to relate, doctors who are caring, doctors who are knowledgeable and highly skilled, doctors who are able to inspire by example and behaviour to bring out the best in values in students, and at the same time inculcate confidence and compliance in patients.

These values can be epitomised by Ambroise Pare's oft-quoted observation: "to cure sometimes, to care often but to comfort, always"[1]. It is both a science and an art and it is best learnt by apprenticeship, where the teacher is master and the pupil apprentice. Ideally the master should be the role model whom the apprentice strives to emulate.

Past role models inspire in different ways. Those with a bent for research might look to Alexander Fleming, Edward Jenner or John Hunter for inspiration.

Alexander Fleming, the British bacteriologist, impresses by his acute powers of observation. Penicillin would not have been discovered had he not realised the significance of an accidental presence of mould on the *staphylococcal* culture plate[2].

Edward Jenner, the British country doctor, applied the then common knowledge that milkmaids who caught cowpox were immune to smallpox. Jenner was the forerunner of preventive medicine[3]. He successfully vaccinated an eight-year-old boy against smallpox with the contents of a cowpox pustule. Jenner was a pupil of John Hunter, the celebrated Scots surgeon of Hunterian chancre fame.

Hunter was a fervent and intrepid experimenter. In trying to find out whether syphilis and gonorrhoea were two forms of the same disease he inoculated himself with pus from an infected patient. Unfortunately the patient had both illnesses. Hunter erroneously concluded that syphilis and gonorrhoea were one and the same disease. In the process he himself was infected, dying later from syphilitic aortic aneurysm[4].

Others who are clinically minded look to William Osler as their role model. William Osler was the complete and learned physician. He believed the practice of medicine was an art, a calling, in which the heart should be equally exercised with the head[5]. It is interesting to note he initially wanted to enter the ministry of the church[6], a calling of a different kind, but which demanded the same qualities as in doctoring, care and compassion for one's fellowmen. He was said to be "the most revered physician of our time and, perhaps, of any time"[7]. And again "Osler was the most influential physician the English-speaking world has known; his publications totalled over 1500; he singlehandedly wrote a medical textbook (Principles and Practice of Medicine) that was the most popular work of its kind, with a worldwide readership; he performed and recorded over 1000 autopsies"[5].

Osler played a major role in the birth of the medical school that helped set the standard for medical education in America[5], the Johns Hopkins Medical School. He influenced the teaching of medicine in two continents and three countries, having held the positions of Professor of Medicine in four universities - the McGill at Montreal, the University of Pennsylvania at Philadelphia, Johns Hopkins at Baltimore and Oxford in England[6]. He was best known for his teaching of bedside medicine, and was said to have remarked "that if he were ever to be remembered he wished to be known as one who brought medical students to the bedside"[5].

More than 70 years after his death in 1919 he is still revered by many in the profession as a teacher, a high touch clinician (as opposed to a high tech doctor), a humanist and as a scholar of classics. Many of my teachers in the medical school regarded him as the role model par excellence.

ROLE MODELS OF MY TIME

I joined the medical school in 1946 soon after World War II ended. Most of us were fired with idealism by stories of Louis Pasteur, Florence Nightingale, Albert Schweitzer and the like. We had aspirations of bringing aid and succour to the sick and suffering. Others who enrolled with me included Wong Hock Boon, Lim Kee Jin and the late Seah Cheng Siang. All three later became great teachers and role models in their time.

I often wondered why so much effort and time were directed to the selection of medical students each year, when the important selection of medical teachers was not done even more searchingly. The fact that so many young people stop studying after graduating may partly be attributable to the inability of the university teachers to arouse students' curiosity to seek for more knowledge, and to motivate them to continuing education.

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Continuing medical education is vital in the pursuit of medicine. We are all aware the shelf life of current medical knowledge in the face of rapid advances is short. Unless a doctor keeps abreast with his medical education he may not be able to give optimal care to his patients.

Western medicine was just beginning to make an impact in Singapore when I entered the medical school. The War provided the impetus that propelled the discovery of penicillin, forerunner of many other miracle drugs. When the victorious British introduced penicillin to Singapore, Western medicine immediately gained status and popularity. Until then, hospitals had a reputation, unfairly perhaps, of being places where one may gain a live entry but often a dead exit, and therefore to be avoided. This picture changed dramatically with the introduction of penicillin. People were no longer afraid of hospitals; on the contrary the pendulum for some had swung too far the other way. They expected miracle cures for every illness.

It was against this background that we entered the wards to do the clinics. Public respect for Western medicine and doctors could not have been higher. Two of our teachers stood out, the late Professor G A Ransome and the late Professor D E C Mekie. They were particularly outstanding in teaching and in patient care. Both were British. The British at that time held most of the senior teaching posts in the medical school.

Dr Ransome was Professor of Medicine. Internal Medicine was considered a specialty at our time. Ransome covered a wide field of practice. He was what we would call today a cardiologist, nephrologist, gastroenterologist, neurologist, an endocrinologist, oncologist and a chest physician. Often he treated skin and sexually transmitted diseases as well, although there was already an established department of dermatology and venerealogy, but situated some miles away from the Singapore General Hospital. Ransome was as near a complete physician as anyone could possibly be.

Gordon Arthur Ransome was a man of great intellect and intellectual honesty. He came to Singapore in the late 1930s with a distinguished academic record, and worked as an assistant to the late Dr Brunel Hawes. Upon the latter's departure Ransome was appointed Professor of Medicine. He soon made his mark as an inspiring teacher and a brilliant clinician. An ardent admirer of William Osler whom he tried to emulate, he too firmly believed that the practice of medicine was an art, not a trade, a calling, not a business. Like Osler, Ransome was best remembered for his bedside teaching of medicine.

Ransome's teaching rounds were so popular that latecomers were often left out at the periphery of the large crowds of learners, neither able to see nor hear him. The rounds even attracted outside doctors who sacrificed their private practice in the mornings just to attend them.

Let me quote what one of his former house doctors said of him, "In person he was very kind and gracious and treated every patient regardless of station with the same thoroughness, humble in all ways and always prepared to learn from others, including the lowly houseman, giving credit magnanimously when due and ready to admit his own mistakes"[12].

Ransome taught from first principles using the minimum of ancillary aids. When we speak of the art of medicine some of the younger doctors may not appreciate the skill involved. This is what is commonly referred to as "high touch medicine" as opposed to "high tech" where dependence on technology is relied upon to come to a diagnosis. It was a pleasure watching Ransome examining a difficult neurological case, eliciting tell-tale signs with panache and style. The late Professor Seah Cheng Siang, Ransome's pupil and protege, mastered the art well from his teacher, and those of you, fortunate enough to have been taught by him, will understand what I mean.

Ransome inspired us by his dedication and single mindedness. If he had a difficult problem he would not rest or postpone the issue until the solution was found. He taught us professional manners, never to belittle or embarrass our colleagues, to be honest in our professional work, stating our observations and findings exactly as found.

I discovered another of his qualities after I entered private general practice. I had heard of his generosity to patients when I worked as his house doctor but I never had the opportunity of witnessing such acts. After I had graduated, on one of my house visits as a general practitioner I had to call Ransome for a second opinion. When he had completed his examination he turned to me and said, "May I borrow $20 from you?" "Of course," I replied somewhat taken aback. He handed the money to the equally startled patient who was living in rather modest circumstances. "Tell him to buy some nourishing food with it", Ransome added. "He needs good food just as much as the medicines he will be given." Ransome never charged his consultation fee. The master had given his former apprentice a lesson in humanity, a lesson he has never forgotten.

As I mentioned earlier, Ransome taught his students how to work from first principles. By the time we graduated we were able, by applying his principles, to function as house doctors regardless of where we were posted.

Mr D E C Mekie was Professor of Clinical Surgery. General Surgery was also considered a specialty. Mekie operated on every organ and part of the human body, except the female reproductive organs which he graciously left to his O&G colleagues. Even then these organs were not spared. I remember on one occasion a female patient was admitted to his ward for an acute abdomen. It turned out to be a gynaecological problem. Mekie promptly operated on her, obviating the need to transfer her to the O&G hospital. As if he had not enough on his plate Mekie also took under his wing all orthopaedic cases, until the Chair of Orthopaedic Surgery was filled a few years later. Mekie likewise was a complete surgeon.

Mr Mekie, unlike Ransome was an outspoken man. Whereas Ransome was soft spoken, even shy at times, Mekie never minced his words. He allowed his

students to make a mistake once but if the student made the same mistake twice he would assure the poor student that even divine intervention could not protect him from his wrath. Like surgeons in general he was decisive, disciplined and he exuded an air of confidence.

His forte was his ability to speak effectively. Mekie, to my mind, was one of the best lecturers the Singapore Medical College ever had. His speech was precise, sometimes witty but always deadly serious. He never indulged in unnecessary verbiage. He was aware that even the best speaker could rarely hold a listener's undivided attention for more than thirty minutes and his lectures rarely exceeded that limit.

In his Seventh Sir John Fraser Memorial Lecture, delivered in 1969 at Edinburgh University, Mr Mekie said, "It is part of the essential tradition of a profession that the older members are under obligation to impart their knowledge and teach their skills to those who will in turn succeed them." Mekie did exactly that and trained many surgeons in his time including Yahya Cohen and Choo Jim Eng, both of whom in turn imparted their knowledge and skills to a number of you in your younger days.

Beneath his stern exterior, Mekie was a kind and gentle man as many of his patients would testify. Years later when he retired to Scotland, he helped many Singapore and Malaysian medical graduates who went to Edinburgh in pursuit of higher qualifications. Mekie was one of the very few doctors in Singapore of his time to have written a textbook of surgery. His academic pursuits never ceased. In his retirement, despite being severely handicapped with deteriorating vision, he worked for many years as Conservator of the Museum of the Royal College of Surgeons at Edinburgh[7].

In work, Mekie was always approachable. He was for a long time one of the few consultant surgeons doing call duty at night. He never failed to respond to a call even from a low level houseman, regardless of the time of the night. His daily routine included two ward rounds, one in the morning and the other later at night.

Mekie taught the importance of self-discipline, professional responsibility, the need to share skills and knowledge, continuing scholarship and the importance of the skill of communication. He was a caring, inspiring doctor.

We were fortunate that the core subjects of medicine were taught by Ransome and Mekie, laying the necessary foundation to our future career. Both were specialists of their time, but were in fact generalists by practice. Both taught us whole person medicine, an approach that was so necessarily emphasised in patient care.

Perhaps this story may explain what I am trying to convey to you. A few years ago I was called to see an uncle of one of my employees. He had come a year earlier to Singapore from Malaysia to seek specialist treatment for what was later diagnosed as metastatic cancer. Prior to the discovery of his malignancy he had been treated for some time in Malaysia, for hypertension, diabetes mellitus and ischaemic heart disease. The oncologist in Singapore referred him to a cardiologist and an endocrinologist to manage his other complaints.

When I saw this man he was obviously dying and in pain. His family wanted to know from me whether he could stop his medications prescribed for his multiple illnesses, as he had great difficulty in swallowing. The most he could manage were pain killers. The specialists looking after him focussed their entire attention on his diseased organs, overlooking his other needs. This is a recurring problem when patients have direct access to specialists.

In an editorial in the 15 December 1991 issue of the Annals of Internal Medicine the editors Drs. Robert and Suzanne Fletcher said, "most sick adults have more than one disease, each involving more than one system. In our former clinic practice at a teaching hospital, patients had an average of five medical problems; fewer than 15% had a single problem"[9]. Specialists confine their practice to their own specialty, forgetting that patients because of such direct access do not have an overall generalist to care for their other needs, and in this particular case the most immediate need.

Ransome and Mekie could be described as complete doctors in their respective fields. We need such doctors, if not in fact at least in outlook to be teachers of medical students. The ideal clinical teacher should therefore have a broad based training even if he decides later to branch into a narrower field. Medical students are best initiated into medicine by generalists in order to gain the right perspective and to develop the ability to treat a patient as a whole person.

The relationship between Ransome, Mekie and their students was akin to a master apprentice relationship. Such a system was made possible by the small number of students and the frequent contacts they had with their masters - in the wards, in the outpatient clinics, and for surgery in the operating theatres.

I have spent considerable time talking about Ransome and Mekie. This is intentional. They are two of the generation of teachers who have left behind them a legacy that the profession can be proud of. They trained such great teachers as Yahya Cohen, K Shanmugaratnam, Gwee Ah Leng, Wong Hock Boon, Lim Kee Jin, N Balachandran, the late Seah Cheng Siang and a host of others who continued or are continuing to propagate this great legacy. The latter trained many of you, some of whom are holding senior teaching positions today. It is important that this legacy should not wither and perish for want of continuity.

I should not leave without mentioning the names of the late Dr B R Sreenivasan and the late Tan Sri Professor T J Danaraj.

Dr Sreenivasan, a brilliant doctor, had already left Government service when I reached my student clinical years. His love of teaching made him return two mornings a week to the teaching wards, to share his vast knowledge and experience with medical students. A man of rare erudition, he was well versed

both in the medical sciences and in the humanities. Dr Sreenivasan often spouted Shakespeare at will, reciting long passages from memory in his accentless English. He said a doctor to be truly effective must be well rounded in his education. How else could he deal with man with all its complexities. I was privileged to be able to see his library when he was alive. The shelves were stacked with rows and rows of books, both medical and non medical.

Like William Osler Dr Sreenivasan was an educated man, an effective teacher, an eternal scholar. He reinforced what Mekie said earlier, that it was "part of the essential tradition of a profession that the older members are under obligation to impart their knowledge and teach their skills to those who will in turn succeed them." Dr Sreenivasan also taught the need to learn outside the confines of medicine.

Dr Danaraj was an excellent teacher and an able administrator. He was responsible in bringing order and discipline to Ransome's unit whose chief had no interest in such matters. Danaraj later went on to establish from scratch the Medical School in Kuala Lumpur bringing honours both to himself and to the school.

Danaraj drilled us, when we first started clinical training, the basics of general medicine. He instilled into each one of us the need to have a disciplined and systematic approach in history taking, clinical examination, laboratory or other investigations, treatment, and finally case presentation. He taught us the importance of having self-respect in order to gain trust, confidence and respect from patients, and that included proper attire. The lesson was brought home years later when I heard my patient telling me of his hospital experience. He mistook the shabbily dressed night-duty doctor for a ward attendant, and resisted the doctor's attempts to examine him.

Danaraj left for the UK for his membership examinations before we completed medical school. Nevertheless he left his indelible mark on the students he taught.

ROLE MODEL CHARACTERISTICS

What do role models have in common? They share these characteristics:

(1) They inspire by their example and conduct.
(2) They have a love of humanity.
(3) They are highly skilled and knowledgeable.
(4) They have a broad perspective of life.
(5) They have an ability to teach effectively.
(6) They are well versed both in the art and science of medicine.
(7) They have the patient's welfare their foremost priority.
(8) They have the necessary self-respect which enable them to gain respect from others.

CHANGES IN HEALTH CARE SYSTEM

Singapore has undergone tremendous changes since gaining its independence, affecting almost every aspect of its citizens' lives. Health care was not spared. Health care changes were not entirely due to changing priorities brought on by independence. Advances in medicine and in medical technology also played a significant part. These changes had and continue to have a profound effect on the medical profession.

Changes included the creation of new specialties, the creation of health care as a service industry and the restructuring of public hospitals.

With the creation of increasing number of new sub-specialty departments in hospitals, student teaching is at risk of becoming fragmented. If students are taught entirely by specialists they are likely to miss the true nature of medical practice. A patient's well-being is not determined solely by a diseased part or organ but rather on the composite whole. Moreover a diseased part or organ does not limit its effects on the particular organ or part but often affect a patient's other components of his well-being as well. All sub-specialists should therefore spend an adequate period of their training in general medicine or surgery so that they are able to practise holistically and also be better equipped to help students link the parts to the whole.

Creation of health care as an industry has set up a parallel service to compete with public hospitals. Private hospitals offering specialist care has led to a depletion of doctors, including teaching staff from public hospitals.

Restructuring of public hospitals affected student accessibility to patients. The professional fee sharing scheme introduced in 1991 to narrow the gap between public and private sectors gave rise to conflicting priorities between service and teaching demands. The scheme also led to distortion of manpower distribution. Rising affluence, rising public expectations and rising public consciousness to litigation have given rise to a new type of philosophy of practice, the practice of defensive medicine.

The changes stated above, as mentioned earlier, had a profound effect on the training of young doctors. Changing attitudes, increasing service demands, loss of teaching staff and diminishing patient accessibility affected student teaching and training.

I have had occasions in the past to speak to school leavers applying to enter medical school. Many appeared to be keen young men and women who said they chose to do medicine because they thought it was a noble profession. To my dismay, some of the same people I spoke to after they completed medical school no longer spoke of the nobler traditions of medicine. They appeared to have changed. Has the changing environment of medical practice attracted the wrong kind of people in the first place to choose to study medicine? Or has that environment affected their attitudes after they entered medical school?

Since 1995 newly admitted members of the medical profession were required to make the Singapore Medical Council Physician's Pledge[9] which reads:

"I solemnly pledge to -
dedicate my life to the service of humanity;
give due respect and gratitude to my teachers;
practise my profession with conscience and dignity;
make the health of my patient my first

consideration;
respect the secrets which are confided in me;
uphold the honour and noble traditions of the medical profession;
respect my colleagues as my professional brothers and sisters;
not allow(ing) the consideration of race, religion, nationality
or social standing to intervene between my duty and my patient;
maintain due respect for human life;
use my medical knowledge in accordance with the laws of humanity
comply with the provisions of the Ethical Code; and
constantly strive to add to my knowledge and skill.
I make these promises solemnly, freely and upon my honour."

The fact that the Physician's Pledge was introduced as recently as 1995 makes one wonder why it was not considered necessary to introduce it earlier. Have changes in health care system affected doctors' attitudes? Have social changes in Singapore altered its people's values? Was the Pledge introduced to remind doctors of their obligations and responsibilities to be followed later by introduction of penalties against their non-compliance? If health care were to be accepted as a service industry and subjected to market forces like any other industry, then the observance of "the honour and noble traditions of the medical profession" become less relevant than the observance of the rules and regulations of that particular industry. The Straits Times of the 26 August 1997 published a mechanism of imposing penalties on doctors against their breaches of rules and regulations. Is this a forerunner of things to come?

I believe most doctors still believe health care in whatever form is a calling, dedicated to the service of humanity. It is of vital importance that this attitude be retained and passed on to our successors. The time may come when a whole new generation of teachers brought up in an environment where doctoring is no longer a calling but a service industry leave behind them a legacy that commands little respect. To prevent this happening steps must be taken to retain good doctors and especially good proven teachers in the service.

REASONS FOR STAFF EXODUS

There are many reasons why doctors leave public service. Unsatisfactory working environment, insufficient pay to meet important needs, conflicting work demands, loss of erstwhile fringe benefits and slow recognition of work performance were some of the factors cited. These must be carefully studied by responsible people who have the authority to address the grievances. Since Singapore's only resource is in its people, it is of absolute importance that the right people who are capable of training and nurturing be retained and adequately rewarded. These are the people to invest in for their multiplier effect on Singapore's future generations.

For comparison let me refer to earlier local role models. I have excluded Ransome and Mekie who were not employed on local terms. Yahya Cohen, Wong Hock Boon, K Shanmugaratnam, N Balachandran, the late Seah Cheng Siang and many others all remained in Government service till retirement age, and for some even beyond. There were sufficient attractions in the service for them to stay.

No doubt the private sector could have paid them more, much more perhaps, but their important needs were taken care of by salaries which were commensurate with the then cost of living. They had meaningful fringe benefits that gave them added security. In addition teaching appointments in those days conferred on the incumbents a special status which was highly prized. They were given recognition for their teaching abilities measurable by the quality of doctors they produced. To sum it, there was work satisfaction and a sense of fulfillment.

I must agree conditions have changed considerably since then. New strategies must be found to retain role models both existing and potential ones.

ROLE MODEL DEVELOPMENT

Times change. Yet certain fundamentals remain constant. In 1903, nearly one hundred years ago, William Osler observed: "The times have changed, conditions of practice have altered and are changing rapidly, ... (but) we find that the ideals which inspired them are ours today, ideals which are ever old, yet always fresh and new...."[10]. In other words the fundamentals for the practice of good medicine never change.

What do change are the people who practise it. It is beholden upon the people in charge to identify and nurture future role models in order to preserve and propagate these fundamentals. More than ever role model teachers are needed to combat the less desirable values of commercialism.

Here let me quote what Dr Gwee Ah Leng said in the first SMA Lecture in 1963. "... medical educationists must not aim at the production of medical technicians who concern themselves with science and finance, but they should rather promote a special class of professional people known as the medical men - men who are concerned not only with knowledge or profit and loss, but also with the philosophy of living and morality. It must be stressed that a fool without moral is only a social nuisance, but an intelligent mind, bereft of scruples, is a danger to society. Hence, medical education is imperfect and even menacing, if it neglects the human side of a doctor's training"[11].

How can we encourage the development of role models? We should create an environment that gives due recognition to good medicine. We should create an environment that gives due recognition to role models for their multiplier effect. We should publicise career paths for outstanding teaching staff in addition

to giving special awards. We should ensure those so identified remain in service by giving them:

(a) security in service and in retirement.
(b) promotions based on performance on primary responsibilities of teaching, patient care and research.
(c) protected time for teaching.
(d) protected time for research.

We need to go beyond penalties and pressures. We need to inspire a whole generation of new doctors through their role models.

CONCLUSION

Time is not on our side. Doctors still in service who have inherited the legacy left by the above role models are dwindling in numbers, through resignations or through attrition because of age. Special effort should be made to identify and retain them. It is worth the extra expenditure to invest in those so identified. Their multiplier effect is the one effective means of producing more caring, more ethical and more competent doctors. Not Pledges. Not Penalties.

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