

Medicine through the Ages – Interview with Dr George Khoo and Dr Daphne Khoo

Interview by Dr Toh Han Chong, Editorial Advisor

The way medicine is practised has changed over the years, but the profound art of treating patients with utmost professionalism and heart remains the same. Dr Toh Han Chong (THC), Editorial Advisor of SMA News, was honoured to interview Dr George Khoo (GK) and his daughter, Dr Daphne Khoo (DK), on their medical journeys through their respective eras.

A different era

THC: Firstly, Dr Khoo, happy birthday! May I ask how old you are as of three days ago?

GK: I'm 91 this year!

THC: Wow! In a recent *Straits Times* interview, the article cited you as probably the oldest practising doctor in Singapore.

GK: Of those still working full time, yes!

THC: You have been affectionately called “Dr Rochor” in that same community. Can you tell us some of your reflections about Rochor and why the neighbourhood is so special to you?

GK: First of all, Rochor was known as *sio poh* or “smaller Chinatown”. It's very historical as many people from the region would go there to trade. They arrived by the scores on sailing boats, bringing their produce and selling there. And of course there, you have the Indians – in Little India, the Malays – in Kampong Glam, and some of the biggest churches – Catholic, Methodist and Church of England. Then you have the biggest mosque and Indian temples there, as well as the Jewish community. So it's a really fantastic place, including being a place where one could buy exotic foods and animals, such as snakes and crocodiles.

THC: I understand that there was also a lot of crime in Rochor in the 1960s.

GK: Yes, there was a lot of poverty and crime, and I knew the king of the pickpockets.

THC: Was the king of the pickpockets your patient?

GK: Yes, he was my patient. He once had a cut (*gesturing to the upper lip*) and came to see me for help, but I said “cannot *lah*, the thing has split too wide, go and see that xxx doctor who has more experience”. He says, “I don't trust the person, I want you to do it”. So after I sewed him up, it was still crooked. (*laughs*) There were real issues in Rochor then, especially at Middle Road where the gangsters hung out. Then you had the opium smokers. Very interesting times then – I wouldn't exchange it for the world.

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The gangsters would look after me. If another gangster came to disturb me, my gangster friend would say, “you just tell them the number ‘8’.” The police also looked after me and others in the neighbourhood. Sometimes the situations were challenging but one must be able to adapt. Adaptation was the key to survival. You had to adapt to all kinds of people, aside from the gangsters, even the *Chap Ji Kee* kings – all seven of them.

THC: *Chap Ji Kee* kings?

GK: Yes, *Chap Ji Kee*. I’m doctor for all seven of them!

Continual practice

THC: How has your practice changed between operating at Rochor and Veerasamy Road?

GK: In Rochor, the patients were a mix – both the residents as well as from the businesses. And because I had been there a long time, I saw a lot of patients with chronic diseases as well as families. Some residents had seen me for more than 50 years, from the time they were babies. In Veerasamy Road, my patients tend to be younger and there are more foreigners. There are also backpackers and foreign workers who come for health checks and work permit check-ups.

THC: With over 60 years of practice, how have you seen medicine change?

GK: Well, in the early years of my practice, medicine was mainly based on medical acumen since we had so few tests available. We only had X-rays and no other radiology tests. We could check total white and differential counts. However, there were no liver function, thyroid or other tests. There were no blood tests for glucose either – not even urine dipsticks. We checked for diabetes by adding Benedict’s solution to the urine and then heating it over a Bunsen burner. Sometimes, I would do it in my clinic, but if I were busy then I would send it to the hospital. The only treatment we had for diabetes was insulin. We used to study *Materia Medica* and had to reconstitute certain medicines.

I also worked for a while in the UK. At that time, we still had a number of British doctors around so one of my bosses arranged for me to train in Newcastle. I worked in Newcastle and Great Ormond Street in London. It was the same situation in the UK – the treatment of diabetes was very different then. We used to give the diabetic coma patients hundreds of units of insulin a day.

Then there was a time when the pay for Singapore’s Government doctors was cut substantially and many doctors left, doubling the workload for those of us who remained. My personal record was set one day when I was at the Kallang Clinic in the morning and SGH A&E in the afternoon. That day alone, I saw 582 patients altogether!

Doctors were highly respected when I first started working. When I went back to Malacca for housemanship, the traffic policeman directing traffic would salute me every

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time I passed by! Our houseman's quarters there were huge bungalows. However, at the same time, I had to work very hard. I was on call six nights out of seven.

THC: Dr Toh Chin Chye, your former medical school physiology lecturer, was then Member of Parliament for Rochor?

GK: Yes, that's why he dragged me into grassroots work which spanned forty years!

THC: Did you ever consider joining politics?

GK: Yes, they offered me a party membership, but I said that I didn't want to. I started here in Rochor as a doctor and I wanted to continue practising medicine.

TCH: Going back to the topic on medical school, maybe tell us about your time in medical school. You are well known to be close to Tun Dr Mahathir and his wife Siti Hasmah since the early years.

GK: Medical school was very good. There were 58 medical students and 18 dental students. So it was a small cohort. On the first day, the first classmate to greet me and asked if I was George Khoo was Hasmah.

THC: You knew her first?

GK: The first person I met was her.

THC: I hear she's a very nice person.

GK: Yes, her husband was a quieter person, and often kept to himself.

THC: Your friendship has spanned so many years since!

GK: We share one thing in common: we have always trusted each other. We used to have arguments about racial and political issues; I grew up in Malacca surrounded by Sikh, Indian, Eurasian, Chinese and Malay neighbours, so I was very comfortable with all groups. Times were different and much more informal then. A relative of Tunku Abdul Rahman, Malaysia's first prime minister, lived next door to my family. Tunku would often visit Malacca and would pop in to visit my father, who was then postmaster of Malacca State, just to chat.

THC: Do you talk about politics when you meet up with Dr Mahathir now?

GK: Every time we meet, the talk is all about politics. When it comes to politics, he's fiery.

THC: I think he was totally passionate about making Malaysia a better place.

GK: That's true. As he said previously, "in politics, there are no permanent friends, no permanent enemies, only permanent objectives." That's why Mahathir survives. Besides being the only prime minister elected in his 90s, he's probably the only prime minister in the world who has led governments of two different parties.

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Mahathir and I get along but we don't agree on many things. Number one is that we agree to disagree on race, religion and politics.

THC: But that's true friendship. It's almost like a marriage.

THC: He always mentions how close he is to his medical classmates. Can you give some examples?

GK: Well firstly, he organises class reunions every few years although now that everyone is in their 90s, not many can go. Once, when our children were still young, the family took a bus tour to Thailand. Flying overseas for holidays was very expensive unlike nowadays. The British pound used to be equivalent to eight Singapore dollars! Mahathir knew that we would be crossing the Thai-Malaysia border at Kota Bahru, where he was working as a GP. As we were approaching the customs checkpoint, we saw someone at the side of the road waving at us and it was him. At the checkpoint, the customs officer said that someone wanted to speak to me on the phone and it was Mahathir inviting us to stay with him for a few days. He also said that he would then send us to Bangkok, but of course I said it wasn't possible. And when Daphne was getting married, he attended the wedding even though he was already the prime minister.

THC: Are you considered an outspoken person?

GK: You're right. I'm a bit outspoken!

DK: Here, I will quote his friend who said, "What George doesn't know is not worth knowing, but sometimes what George knows is better not to know."

THC: So back to the Rochor neighbourhood. Dr Chan Ah Kow was also a famous GP who practised there.

GK: He was very good. He and I got along well.

THC: Did you ever regret not getting more involved in politics?

GK: Yes and no. I suppose I could have risen in politics particularly if I had returned to Malaysia.

DK: You were also very close to Dr Christopher Chen's father, who was the founding chairman of the Democratic Action Party in Malaysia.

GK: Yes, he was my badminton partner in medical school.

THC: Readers will want to know how, at 91 years old, you can still practise with so much passion and energy, and possess such a clear, sharp mind. What's your secret?

GK: The main thing for me is that I must stay busy.

THC: What about your lifestyle? Eating habits?

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- GK:** I still do regular walking, and I played badminton until the age of 60. I exercise my brain and I like to talk to young people. I can get a lot of new ideas from them.
- THC:** What are your favourite books and movies?
- GK:** *The Art of War*, *Red Star over China* and *The Good Earth* are some books that I enjoy. For movies, it would be *The Manchurian Candidate*, *Gone with the Wind* and *High Noon*.
- THC:** Finally, who do you admire and why?
- GK:** Franklin Roosevelt, Winston Churchill and Deng Xiaoping. Firstly, they were all great leaders. Secondly, they all overcame major setbacks – Roosevelt had polio, Churchill struggled academically and Deng Xiaoping was purged from leadership roles twice, but they all went on to change world history nonetheless.

The next generation

- THC:** Daphne, thanks for doing this interview with your father. The first question is, “Did your father influence you to do medicine?”
- DK:** My father was a GP and my mother was a radiographer. When we were growing up, we actually lived in hospital quarters at College Road. Doctors were allowed to stay in huge old houses on hospital grounds then. My mother used to bring me to her workplace after school sometimes. I really don't remember a time in my life when I wasn't going to Singapore General Hospital (SGH). So it was more or less impressed on us that we were a healthcare family.
- THC:** So growing up in Singapore Chinese Girls' School then Anglo-Chinese School Pre-University, your former schoolmates recount that you did really well in school without trying very hard. You were one of the top students, I believe.
- DK:** I think I peaked then. (laugh)
- THC:** Rumour has it that you spent a lot of time reading Mills and Boon.
- DK:** During medical school, you didn't have time to read Mills and Boon as life was very demanding then. But certainly, when I became a medical officer (MO), I would read novels during pockets of free time between patients. I don't think it happens now.
- THC:** How was medical school life for you?
- DK:** It was very hard work. It was not unusual for a third of the class to fail certain subjects at the time. In school, I think I was naturally academic, so I could do well and yet have time to pursue other extra-curricular interests. But it wasn't possible in medical school, just because of the sheer volume of work. The first ten years of one's medical career are also very tough years, which was part of the reason I did not encourage my kids to do medicine.

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THC: Having said that, you have risen to very high leadership positions; first as the head of SGH Endocrinology and now, as a senior administrator with the Ministry of Health. Did you ever think you could have done something else?

DK: In fact, I would say that even in school, I was more outstanding in the arts than in the sciences. So, I had actually considered a career in history or archaeology which my parents said wouldn't feed me.

THC: Your dad said that he has no regrets being a doctor. What about yourself?

DK: There are times when I wish I had pursued the arts.

THC: Really?

DK: Yes.

THC: Let's go back to your time in SGH as head of Endocrinology. At your farewell, they gave you a cake with the icing words saying "You Abandoned Us!" What were your feelings then, leaving the public sector?

DK: (*getting emotional*) I felt very, very sad. Even though I had made the decision to leave SGH and SingHealth, I cried for about a week after that. I can honestly say that the two institutions were wonderful to me, and I really felt that very much of what I have become was because of what SGH and SingHealth had taught me – what my colleagues and teachers had taught me. My supervisors and bosses had always been nurturing and supportive. I felt sad when I left, but at the same time, I also realised that the new opportunities in the private and overseas spaces would offer development and growth. I think one thing that SGH instilled in me was the thirst for knowledge and self-improvement.

THC: One of your proteges said that you were one of the most progressive leaders in healthcare. What has been your leadership style?

DK: My leadership style has always very much been based on my strong belief in developing staff. I aimed to groom all of them to be future leaders and stars in their respective fields. I set them challenges, facilitated their efforts and encouraged them to reach their full potential. I generally give my staff a lot of space and am very proud of their successes.

THC: What was it like growing up as a child of Dr George Khoo?

DK: I mean, you don't really think about it because it's the only life you know.

Growing achievements

THC: On to your current position. What do you feel are the necessary priorities of the Agency for Care Effectiveness (ACE)? What is the important job that needs to be done?

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DK: People are rightfully proud of healthcare in Singapore – including the fact that we are considered to have one of the best healthcare systems in the world. But one of the main problems now is cost and, associated with that, affordability. A lot of expensive health technology is coming very quickly, on the background of a rapidly ageing population and a low-tax system. People may not realise that all over the world, a large part of healthcare is paid for by taxes or insurance premiums. There is no free lunch. The challenge is in how to give people the healthcare they want at a price point that is affordable for everyone. I think the quality of our healthcare talent is not an issue, because I think that in terms of training, there are very few countries that invest as much in training, both at the undergraduate level and the postgraduate level, as we do. That's my honest opinion.

THC: Every country has the same problem with this rising cost of technology and drugs.

DK: Yes, that's true.

THC: Are we moving in the right direction where you think that we can deliver medicines which are cost effective and create policies that allow doctors to practise medicine in the most optimal and evidence-based way?

DK: One has to have tough conversations all round, because there are actually three parties involved. One is really the healthcare community – the providers; then of course you have the payers – could be the insurers or the Government; and then third, you have the patients, their families and the public. The question is how does one come up with systems that are perceived to be fair to all. I don't think there can be a perfect system because somebody is always going to be unhappy. But the key point then is how to have frank conversations so that people understand the rationale behind the decisions that we are making and the trade-offs. If you're going to talk about giving patients a lot of time during each visit and you're going to just use the latest technologies, it comes with a high price tag. The question is how you are going to pay for all that.

THC: I think this is the question that every major country will ask in terms of quality and access to healthcare. In the US, the third-party payer system is not perfect, and the UK's National Health Service often falls under a huge strain. Is there a middle path that you think would create the most ideal healthcare system for the people?

DK: I want to be very clear here that I don't speak on behalf of the Ministry. I think the stakeholder engagement is very vital, so that as a country, we come to a common understanding of how much we are prepared to pay for the healthcare that we want. Lately, we have been talking about value because as we manage costs, we cannot lose sight of the fact that we have to simultaneously improve outcomes. ACE's work is not about cutting costs – it is about identifying those technologies that take things to a whole different level versus those that confer only minor improvements in outcomes but come with huge price tags. It's not to say that the latter shouldn't be used at all, but where the costs are much higher than the outcomes justified, then clinicians and patients should understand that.

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THC: Do you ever miss clinical medicine?

DK: Yes and no. These days, I'm doing clinic once a week at Ng Teng Fong General Hospital. What I like about clinical practice goes beyond interacting with the patient, although that's obviously the main thing. But it's also about the intellectual stimulation, working together in a community with your friends, including teaching others and learning from others, and the research opportunities. On the other hand, I do feel that medicine is becoming increasingly difficult to practise.

THC: Why is that?

DK: Public expectations are much higher. You also have all these information technology issues which our doctors can't escape from because everybody is going that way globally. The coordination of care is very complicated now as the patients develop comorbidities. You may have multiple doctors managing one patient and the "best" or most appropriate treatment is always changing. With all the healthcare information and touchpoints that you have for patients nowadays, you really are very worried – did you make an error; did you miss out something? Of course, the environment is also more litigious than before.

THC: Do you think medical school has changed a lot since your father's time to your time, to the current medical school generation?

DK: When I gave a talk at the National University of Singapore Yong Loo Lin School of Medicine recently, I noticed that there were very few students in the auditorium and I was told by the convenor that because these lecture clips are now put online, up to 80% of the students do not show up for lectures. Even if the students were there, many of them were either looking at their laptops or their phones; so you feel that their engagement during lecture time is not there, and that ability to build a connection with the student is now lost.

In the old days, you sat in these large halls where the professor would call out your name, and you had to pay attention because you never knew when you were going to be called upon. With today's students, you don't even know whether what you're saying is really registering. How will you inspire or influence the students when there's so little face-to-face time with them? You can do it through a video, but it's not quite the same.

THC: So do you think that the modern pedagogy is too detached and makes it harder to impart the values you had received as a medical student and young doctor from your teachers?

DK: Well, I'm concerned that in some of these models, you don't have a lot of contact time with students. I feel that is also the time where you have the opportunity to impart values.

THC: Can you tell the readers about some of the professors you remember fondly and who you learnt the most from?

DK: I would say that professors that I have worked closely with were Prof Seah Cheng Siang, Prof Ng Han Seong and Prof Ong Yong Yau from SGH, and Prof Poh Soo Chuan, Prof Chee Yam Cheng and Prof Sonny Wang from Tan Tock Seng Hospital. As I've said, it wasn't only about the practice of medicine but also the values.

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THC: How was your own medical school life and memories?

DK: Maybe because I wasn't a "hostelite", I didn't really see that social aspect of medical school. Staying at home is quite different from staying on campus. Even in my father's time, the Malaysians had a much stronger bond than the Singaporeans who tended to stay at home. But the thing about medical school is that given the very demanding nature of medicine where one is so focused on absorbing huge amounts of information every day, there wasn't all that much time to really have a great social life – at least not in Singapore.

THC: Really? But you're such a gregarious and an outgoing person.

DK: I mean it was rare that you could go a day without studying, much less have a hugely active social life. Well, you could but you would probably end up failing a subject. In my time, you were considered above average if you were a straight-C student.

THC: You went to the Cleveland Clinic for further fellowship training. How was that like?

DK: Oh, I think it was fantastic. I also spent about six months in Edinburgh as an MO on unpaid leave. Altogether, I spent about six months in Edinburgh and fifteen months in Cleveland Clinic. I realised then that even as we look up to all these great institutions that we hear so much about, we must also recognise that our own systems are not inferior. In terms of our teaching and our quality of students, we are not inferior. But for some reasons, we still look to some of those countries as a sort of role model for us. I was very surprised when I passed my MRCP on my first attempt and there were other colleagues from what we would regard as premier medical schools who did not. That was when I realised just how good our local medical training was.

Still, what I appreciated about the great western academic centres was their philosophies. For ours, it's a lot about cramming information and regurgitating that information at the right time. What I found in my exposures to both the UK and the Cleveland Clinic system was their deeper and broader ability to look beyond just day-to-day clinical care.

THC: You have already impacted so many aspects of healthcare in Singapore, in clinical leadership, administrative leadership, private sector and policy making. What do you think is the most fulfilling to you in terms of all the accomplishments?

DK: What was the most impactful and what I enjoyed the most are not the same thing. The years that I enjoyed the most were actually the years I spent on research. I find that research was the most intellectually stimulating part of my career and I went through a few years where I ate, breathed and lived research. At that stage, I even started neglecting my social relationships because the work was so engrossing.

THC: Was this during the junior consultant time?

DK: It was during the consultant and senior consultant transition. But in terms of what makes the most impact, being in administration means that I get to make policy decisions that have greater impact. So what are impactful and what I enjoyed are not the same thing.

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THC: Any comments about the resilience of young doctors which is very topical nowadays?

DK: I am aware that this is something my colleagues are looking into. If you look at the statistics, the numbers of patients treated per doctor per year are actually falling. As my father mentioned, his daily peak was 582, mine was 160, and in this current environment, I doubt most doctors would see beyond 50, if even that. However, there are other stressors – public expectations have changed and of course information technology adds stress. In my father's time, it was not unusual to fail medical school year after year and be held back. It could take up to nine years to graduate from what was designed as a five-year course! In my time, a third of the medical class used to fail exam subjects. I gather that is quite different nowadays and many doctors might not be forced to deal with feelings of inadequacy till they hit the wards. We could and should do more to prepare them for that transition.

Aside from work

THC: You were President of the Association of Women Doctors (Singapore). How was that tenure? What was it like?

DK: One thing that they had fought for was the quota on women medical students in those days, which they lobbied very hard to have removed. They succeeded. I feel that that's the most significant achievement. Most of their activities nowadays are related to social activities and charity; I wish that they would broaden their scope to involve other challenges that women in medicine face. That would be my personal wish.

THC: It is often said that there is really no glass ceiling in Singapore for women in their career, while in some developed countries, there is a glass ceiling that's harder to see. What are your comments on this?

DK: I think that the glass ceiling is partially due to women themselves – me included. Women sometimes are less willing to make the sacrifices in terms of family time and personal time than perhaps men are to get to the very top. And I would say the same for myself.

THC: Just like your father, you look young for your age too! What's your secret?

DK: I have a very wide array of interests – my problem is that I'm invested in too many things. I will be 60 years old this year. Somehow, I've always gone on to bigger and bigger jobs where the complexity of the problems are greater; so while a lot of my friends are thinking of their careers winding down or considering retirement, I am still thinking about the many problems to solve! I like solving problems and I think that this keeps me mentally engaged. Of course, like everybody else nowadays, you have to make time for exercise and family and friends. And don't forget mindfulness!

THC: What do you do for leisure?

DK: *(laughs)* Aside from Facebook? It would be watching Korean dramas, playing computer games and spending time with my dogs.

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THC: What type of games do you play?

DK: *World of Warcraft.*

THC: How does your family spend time together? I mean, you kind of just live next to your dad. *(laughs)* Do you see your dad often?

DK: Every day.

THC: Every day? But you don't live in the same house.

DK: We have dinner every week day. Whenever people broach the topic of me being successful in my career and managing my family and work-life balance, I remember and share that having my parents stay next door to me means that I do get to see them all the time. It also helps in terms of my not having to worry about preparing dinner, doing marketing and things like that.

THC: Have you ever considered entering politics, especially due to your father's influence?

DK: I'd just say that there have been times when there have been overtures, but because of family commitments, I chose to not go down that path.

THC: Do you have any favourite books or films?

DK: I'm going to sound very shallow. For movies, I like rom-coms. Because the nature of our work can be pretty tough going – really grim – so I generally like to escape from reality in my free time. I like reading romance, science fiction and fantasy novels. As for films, I like to watch Korean dramas such as *Descendants of the Sun*.

THC: For you, would *Descendants of the Sun* have the highest impact factor; the *New England Journal of Medicine* of Korean dramas?

DK: That would be the benchmark.

THC: Thank you both for the interview and for sharing your stories with *SMA News*.

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