

FORGING A BRIGHTER FUTURE

Founding Dean of Lee Kong Chian School of Medicine (LKC SoM), Professor Stephen Smith, 60, explains how the way ahead for medicine lies in the integration of ideas and the marrying of minds of doctors, researchers and engineers.



Prof Smith aims to create environments that will bring professionals together in order to benefit patients

#1 WHAT HAS BEEN YOUR MAIN PRIORITY IN RECENT MONTHS?

LKC SoM's Senior Vice Dean, Professor Martyn Partridge and the team have been doing an exceptional piece of work over the last year putting in place the curriculum, which is an incredibly detailed and complicated business. What I've been doing in my other role as Vice President for Research at NTU is to look at ways in which non-medical parts of the university can contribute to, and integrate with the medical school. I have also been working with our healthcare providers and funders such as A*Star. It's about trying to think how we can create environments to generate added value from bringing groups together, that wouldn't be able to contribute as much if isolated. And that has been very enjoyable and encouraging.

#2 YOU SPEARHEADED BRITAIN'S FIRST ACADEMIC HEALTH SCIENCE CENTRE TO INTEGRATE RESEARCH, EDUCATION AND CLINICAL SERVICES TO IMPROVE PATIENT CARE. WHAT DO YOU THINK MEDICAL STUDENTS CAN LEARN FROM THE PATIENT CARE PROGRAMMES?

Service, education and research are integral parts of medicine, and if they are not linked, the doctor or healthcare

group will be out of date within a short period of time. Academic medical centres aren't just about bringing universities and healthcare groups together. They're about changing the mindset of professionals in different fields who work in the organisation to realise that their goals are ultimately the same — to improve the outcomes for patients. As for education, all professionals want to pass on their experience and knowledge to younger people. And that has to come from thinking of what's worked in the past, what works now, and most importantly, what's likely to work in the future.

#3 HOW WILL THE IMPORTANCE OF PATIENT CARE BE IMPARTED TO STUDENTS AT THE LKC SoM?

The students will be made to understand that medicine is a profession that has two arms. On the one hand, being a doctor requires having a body of knowledge that is professional and scientifically-based. On the other, there's the need to have compassion for one's fellow men. So it's about putting these two aspects together. And as Professor Partridge has said, it's about creating a conceptual environment where students understand from the very beginning that this is a job that is different from any other.

#4 WHAT IS YOUR VISION FOR THE SCHOOL?

To create a cadre of doctors suited to the local environment who will meet the healthcare needs of Singaporeans. Besides increasing the doctor pool, we do hope to also bring an aspect of that research — particularly for NTU — in the field of med-tech or medical technology and bioengineering. Increasingly, med-tech is being seen as a great opportunity, both for the patients and for the commercial opportunities that it creates.

#5 HOW DO YOU THINK THE CLINICAL RESEARCH ASPECT WILL IMPACT THE LEARNING EXPERIENCE?

While medical opinions are important, these have got to be backed up by the deep knowledge of research and evidence. I think it's better to train medical students to understand what they did the last time, rather than treat the next 10 patients the same way just because it worked. Every doctor has a responsibility to keep a record of their work to make sure that that knowledge can be built on for improving care in the future. The line of thought should be: "How can I do that clinic better? How can we do that operation better? Why did that drug work differently in that patient as opposed to the other?"

#6 WE HEAR YOU'RE SETTING UP A 'DATING AGENCY' OF SORTS AS WELL, TO GET PROFESSIONALS IN DIFFERENT FIELDS TO WORK TOGETHER IN THE MEDICAL SECTOR...

It's been widely recognised that the greatest innovation comes from bringing different specialties together. For instance, there is no point for say, a bio-med engineer to develop a device that doesn't target the problem it was created for. The needs of both doctors and their patients should, from the beginning, be factored into the way engineers or biomedical scientists design their products. Bringing the engineers, scientists and doctors together tends to produce 'disruptive change' — completely different ways of doing things — as opposed to a group of doctors working in isolation to produce incremental, slow and small-scale changes.

#7 IN THE CONTEXT OF THE NEW MEDICAL SCHOOL THEN, HOW DO YOU PLAN TO MAKE THAT HAPPEN?

Firstly, by creating doctors who are educated in that environment. You want these individuals to see it, get the message and in 10 to 15 years time, continue to innovate. The other way is to make sure you have structures — both physical and human — that bring engineers and scientists together. We're working hard with our healthcare partners to create that and are making some very substantial progress. At the end of the day, what matters most are healthcare services that are cheaper and more efficient, better survival rates, and

better satisfaction from patients. Of course, you can't force people to do this; all you can do is provide the environment and the encouragement, and then you've just got to hope that the chemistry works after that.

#8 BESIDES THE NTU-NHG INNOVATION SEED GRANT, HOW ELSE DO YOU PLAN TO DRAW ON NTU'S EXPERTISE IN ENGINEERING AND BUSINESS TO HONE STUDENTS' SKILLS?

We are looking to develop structures which bring engineers and computational scientists, technologists and doctors together in a loose formal arrangement that allows them to interact and to work together. Many of the best ideas come from young people. We need to think about how to create the environment such that their innovativeness is stimulated or enhanced.

#9 IN A RECENT INTERVIEW WITH THE STRAITS TIMES, YOU MENTIONED THAT YOU WILL FOCUS RESEARCH ON INFECTIOUS DISEASES, AGEING AND MENTAL HEALTH. WHY DID YOU SINGLE OUT THESE AREAS?

As an academic, one gives careful thought to the areas that might provide advances in the future. The areas we selected are ones which blend current expertise and knowledge with a view of where we think the developments are likely to be. As our population ages, so do our chronic conditions and the burden of disease. Twenty years ago, people felt that infectious disease was sort of conquered. Now with SARS and HIV — not to mention malaria and dengue — we know that this will be unlikely. Also, these are areas in which we already have the skills needed to get into a position of global leadership more quickly. There is no financial or health advantage in coming second — it simply means your patients are getting second-best care, and not the best care. In a country as wealthy and as well-run as Singapore, we should be aiming for healthcare that is absolutely in the top league.

#10 HOW ACTIVELY DO YOU HOPE TO INVOLVE YOUR STUDENTS IN RESEARCH?

All students will have opportunities to experience research. It's a fundamental part of the programme. But we'd rather get away from the idea that 'you do this, and then you do research'. Most professionals who encounter a diabetic patient for instance, would typically read the latest papers on treatment for diabetes, or the next drug that's being developed. What they should really be thinking is: "What can I do to ensure that these patients can be put back to where they were before?" And it's not just what you can do for that patient, but what you can do for that next patient and working with engineers, computational scientists or stem cell biologists. How can you put it all together to create what everybody wants — which is to improve the lot of patients? That's the sort of mentality we want our students to have. +