

# KNOWING OUR HEALTHCARE LEADERS

ASSISTANT DIRECTORS  
HEALTH SERVICES & OUTCOMES RESEARCH  
NATIONAL HEALTHCARE GROUP



MR TEOW KIOK LIANG (KL)

**What are your thoughts on the current state of collaborative research in your department?**

**KL** It is certainly fun in collaborative research, where we complement each other's knowledge. In my area of work, my stakeholders have tough and real issues that need to be tackled. They also have extensive domain knowledge. We provide the research capability to help them scale these problems, and at the same time, we learn tremendously from them too!

**WS** In the last few years, we have been working with clinicians and administrators on research that aided their decisions pertaining to the management of specific diseases and conditions. We can bring this collaboration further by moving upstream to look at health systems and programme design based on the current



MS TAN WOAN SHIN (WS)

knowledge base in literature regarding what works and what doesn't. We are also looking at collaborating more with academic partners to bring more rigour to our research work.

I started working with the operations department of the hospital and developing neater equations that could address patient flow and service variability.

**PAL** The users provided me with the data and the real-world complexities, and I tried to impose a structure behind the analysis. Now, I am moving towards conducting cost-effective analyses of interventions which require working with clinicians and having a basic understanding of clinical sciences. Our users are pragmatic users of objective and evidence-based findings.



MR PALVANNAN KANNAPIRAN (PAL)

**Is there a simple analogy that you would use to describe the "As-Is" and "To-Be" state of your research in your institution?**

**KL** As-is: bonsai. To-be: garden with thousand flowers.

**WS** "To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science" - Albert Einstein.

This describes the As-Is and To-Be state, to constantly evolve... research is a process.

**PAL** "The mind, once expanded, does not return to original confines." Internally our department's circumference of analysis is always expanding with time, exposure and interactions. We have to strike a balance between answering the

stakeholder's research questions and raising important research questions.

### What do you think are the qualities of your department that allows it to catalyse collaborative research?

**KL** Diversity among us, sharing culture, trust built over the years, and the many fun things that we do together help make working together fun.

**WS** The strength of the department is in keeping an open mind regarding techniques. Rather than look for questions that will utilise our individual technical expertise, we seek to provide the evidence to answer questions using the most relevant techniques. Having a multi-disciplinary team is definitely our key strength.

**PAL** There are analytical professionals from all domains of sciences: life sciences, social science and physical science. The viewpoints and tools of analysis cover an impressive breadth and a test ground for collaboration first. Two mantras shape the department's research approach: clarity of the research question, and the impact on patient's health outcomes.

### Could you share an example of a piece of collaborative research that you are involved in and how it has benefited the various stakeholders?

**KL** This project involved working with Tan Tock Seng Hospital (TTSH), National Healthcare Group Polyclinics (NHGP) and National University Hospital (NUH) pharmacists. The institutions were on the journey of automating the pick-and-pack process, and use of the automation machine.

In order to optimise the machines, a very detailed and complex planning analysis had to take place. By taking a very scientific approach, we expect to have cost savings and greater efficiency in running the processes.

**WS** The percentage of elderly Singaporeans is estimated to increase from 8.4% in 2005 to 18.7% in 2030. Population ageing has major implications on health and social services, with increased age comes a greater

likelihood of having a disability and needing assistance.

The Marine Parade Elderly Needs Survey 2011 was designed to assess a broad range of factors impacting on the needs of the older person. Care needs cannot be defined on age alone but also on the individual's general health and well-being, risk status, social support and socio-economic status.

We worked closely with the Health Promotion Board, Ministry of Health, Agency for Integrated Care, Ministry of Community Development, Ministry of National Development and the Centre for Enabled Living and the Marine Parade grassroots to design the survey tool.

After the project was completed, the results were utilised by the various agencies to design health and social interventions to meet the needs of the Marine Parade residents.

**PAL** Recently I worked with the infectious disease control department to study if using Polymerase Chain Reaction (PCR) for universal screening would be cost-effective.

Dr Brenda Ang explained the decision context, Dr Heng Bee Hoon raised the key questions, the nurses described patient care, clinicians gave the background of Methicillin-resistant Staphylococcus aureus (MRSA), economists carefully identified cost elements and comparative framework, the hospital's Information Technology (IT) department provided the data, operations department explained the ground issues, vendors described their specifications and the academia was a sounding board.

I put together the decision model to inform what was to be done for improved patient health outcome. Now that is collaboration.

### On a lighter note, what do you like most about your job?

**KL** Contributing a little to society, having good colleagues, using my grey matter somewhat, and getting paid!

**WS** That I get to learn new things and life doesn't get boring. And of course, working with a bunch of like-minded people makes work enjoyable.

**PAL** There is research, consulting and teaching with a hospital focus for public good.

### How do you handle the tight demands of your schedule and yet find time for your family?

**KL** To be both happy at home and work, things just work out well.

**WS** Time has to be set aside. Making a commitment to do so will ensure work-life balance.

**PAL** Work does flow into my personal life. But reading is not a bad hobby and fits into research.

### What do you like to do in your spare time? Do you have any hobbies?

**KL** I practice Chinese calligraphy with a group of friends on Saturdays and I bring my family along. Sad to say, my skills are still so-so.

**WS** Reading, travelling, cooking for friends and family, and watching movies.

**PAL** I don't take to travel unless required. With friends I enjoy chats about the tiny red dot and nostalgia and watch movies. On my own, I learn playing the piano and go to the gym. I enjoy watching my daughter draw and hear my son speak Tamil too.

### Does your personality and love for your hobbies help in making decisions in your research work?

**KL** Maybe it does, but preferably I should not be thinking about work when I am enjoying my hobbies. Retrospectively, they may turn up useful.

**WS** I like to learn new things (reading, travelling, trying out new recipes) so this is translated in my approach to work as well. I try to read widely across a range of subjects. It helps to keep an open mind about things and approaches to take, since there are many ways to Rome.

**PAL** Generally, I think I have a multidisciplinary perspective and like to connect the dots. In that regard, health services research is invigorating.