



# e-catalyst

## ACCELERATING RESEARCH



### Tackling Diabetes with Large Cohort Studies



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### Annals, Academy of Medicine Best Publication Award 2016 – Gold



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### A Family Physician's Journey in Research and Education



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### Antibiotic and The Gut Bacterial Metagenome: A Prospective Study



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- Seminar on "Prospective Cohort Studies: Rationale, Methods, and Some Examples"
- Congratulations A/Prof Daniel Fung and team for being awarded the 2017 International Serious Play Awards

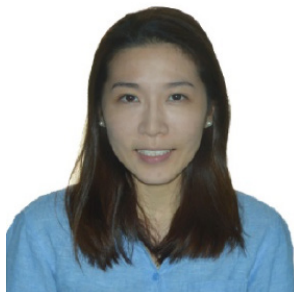


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## EVOLution in Improving Cataract Surgery Outcomes

Cataract surgery has progressed rapidly with improving diagnostic technologies, intraocular lens (IOL) designs and surgical approaches. An aspect that the patient is less aware of is the predictive formula that informs the surgeon the appropriate IOL power to be implanted. An accurate formula improves the refractive outcome of the patient.

Dr Yeo Tun Kuan, consultant ophthalmologist at TTSH has recently developed a new IOL formula called the Emmetropia Verifying Optical (EVO) formula based on the theory of the eye's natural emmetropization process. It is a complex thick lens optical formula that utilizes mathematical iterations to generate the recommended IOL power. The formula was presented at the 30th Asia Pacific Association of Cataract and Refractive Surgeons conference in Hangzhou, China in June 2017 and **won the best poster for cataract surgery** and best free paper of the session. (Figure 1)

The EVO formula was compared to existing IOL formulae (Barrett Universal II, RBF, Haigis, Holladay I, SRK/T and Hoffer Q) in 817 eyes and was found to have the lowest median absolute error, standard deviation and mean absolute error. It also had the joint highest percentage of patients within 0.5 absolute error of prediction at 82.0% with the RBF formula. This was followed by the Barrett Universal II

formula at 81.9%. The EVO formula was found to be statistically better than the commonly used formulae in our current practice (Haigis, Holladay I, SRK/T and Hoffer Q). (Table 1) Furthermore, the formula was noted to have no bias against corneal power and axial length, suggesting that it is a universal formula that can effectively predict for eyes of different corneal powers and axial lengths.

The EVO formula is currently available online for surgeons to use at [www.evoiolcalculator.com](http://www.evoiolcalculator.com). It is envisioned **that this tool will assist surgeons in improving their patient outcomes and satisfaction.**

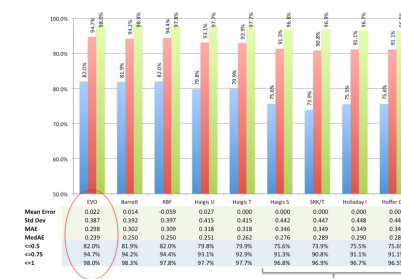


Figure 1. Best Poster at APACRS

Toric	IOL Power (SE)	Refraction (SE)
0	17.5	0.61
1	18	0.3
2	18.5	-0.02
3	19	-0.33
4	19.5	-0.65

Table 1. Comparison of IOL Formulae



Contributed by:  
**Dr Yeo Tun Kuan**  
Consultant  
Department of Ophthalmology  
Tan Tock Seng Hospital

## LKCMedicine Celebrates its Official Opening

On 28 August 2017, almost seven years to the exact day when Prime Minister Lee Hsien Loong first announced the formation of this new medical school in his National Day Rally Speech, the Lee Kong Chian School of Medicine (LKCMedicine) was officially opened. **Guest-of-Honour Deputy Prime Minister Mr Teo Chee Hean celebrated this milestone event** with the School's many patrons, partners and well-wishers, including Minister for Education (Higher Education & Skills) Mr Ong Ye Kung, Senior Minister of State for Health Dr Lam Pin Min and Minister of State for Asia & the Pacific at the UK's Foreign & Commonwealth Office Mr Mark Field.

The young, but no longer new, School marked this latest milestone with a celebration of its pioneering moments and people: staff, faculty and students; key decisions captured in early documents; leaders from its parent institutions, **Nanyang Technological University, Singapore (NTU) and Imperial College London (Imperial) and primary**

**healthcare partner the National Healthcare Group (NHG);** and the many individuals who have contributed or inspired the creation of LKCMedicine. Their commitment to the vision of redefining medicine and transforming healthcare has propelled LKCMedicine to successfully instil a new DNA in medical education and research into Singapore's landscape.

**To commemorate the official opening, the Guest-of-Honour sealed a time capsule that will remain shut until the School turns 50.** Mr Teo was joined by Mr Ong, Dr Lam, Mr Field, LKCMedicine Governing Board Chairman Mr Lim Chuan Poh, NTU President Prof Bertil Andersson and Imperial President Professor Alice Gast as well as Chairman of the Lee Foundation Dr Lee Seng Tee, NHG Group CEO Professor Philip Choo and LKCMedicine Dean Professor James Best, all of whom placed historical documents or mementos relating to LKCMedicine into the capsule before Mr Teo closed it.

**The opening of LKCMedicine is a landmark on the School's journey towards becoming a world-class medical school.** The LKCMedicine community is eagerly awaiting the graduation of its inaugural cohort of students who will enter the healthcare workforce in May 2018; while new discoveries and breakthroughs in medicine and biological sciences will transform our understanding of health and disease as the School's faculty continues to tackle major health concerns such as diabetes, cardiovascular diseases and dengue.

Source: First published on LKCMedicine website on 28 August 2017.  
Click [here](#) to read more.

Contributed By:  
**The Lee Kong Chian School of Medicine**



## Tackling Diabetes with Large Cohort Studies



LKCmedicine Professor of Cardiovascular Epidemiology Prof John Chambers built his research career studying populations, in particular, Asian and South Asian populations, to understand why they have higher risks of cardiometabolic diseases. And where better to base his work than Singapore, which has one of the world's highest rates of diabetes.

He is leading a landmark prospective population-based cohort study, called Health for Life in Singapore (HELIOS) study, on which he collaborates with experts from Imperial College London (Imperial) and National Healthcare Group.

“Coming to Singapore and LKCmedicine locates me at the heart of the population I hope to study. My work in HELIOS will deliver a unique cohort study for Singapore, while for me, it will strongly contribute to my ambition to describe why these population have higher risks of cardiometabolic disease,” said Prof Chambers.

The Oxford graduate and trained cardiologist was inspired to focus on populations during one of his very first university lectures by world-renowned epidemiologist Sir Richard Doll. Together with his mentor, Imperial Professor of Clinical Cardiology Jaspal Kooner, Prof Chambers, who was working in

north-west London at the time, carried out a first-of-its-kind prospective population-based cohort study, called the London Life Sciences Prospective (LOLIPOP) study, to understand why South Asians have a much higher risk of cardiometabolic disease than their European counterparts. He is following this up with a similar study of South Asians living in South Asia, while at the same time harnessing the data from LOLIPOP to advance diabetes care through interventional studies of Asians and South Asians.

One of these studies is the “Translating ‘omics into stratified approaches for prevention of type 2 diabetes”, for which he received the National Medical Research Council (NMRC)’s most prestigious Singapore Translational Research Investigator Award earlier this year. Collaborating with physicians from Tan Tock Seng Hospital, Prof Chambers aims to determine whether disturbances in DNA methylation and other molecular biomarkers can be used to better identify and treat people at high risk of developing diabetes.

### Introducing HELIOS

HELIOS is a collaborative prospective cohort study with NHG and Imperial that is led by LKCmedicine. This population study aims to identify genetic and environmental factors that underpin the development of obesity, diabetes, cardiovascular and other complex diseases in Singapore through collection and mapping of phenotypic measurements, biological samples and long-term follow-up of participants. In time to come, the ultimate goal is to develop the HELIOS database

into a powerful resource to aid the development of new approaches for prediction, prevention, early detection and improved treatment of common chronic diseases in Singapore, thereby, improving the lives and health of generations of Singaporeans and Permanent Residents in time to come.

### Some facts about HELIOS:

1. It aims to be the most comprehensive evaluation of the health of Singaporeans and Permanent Residents.
2. The study will carry out a comprehensive baseline evaluation, which includes assessment of lung function, body composition, bone density, blood vessel structure and function, eye health and a wide range of blood tests for each participant, and then follow their health status over the longer term.
3. Data will be securely stored for at least 20 years.
4. About 10,000 Singaporeans and Permanent Residents aged 30 to 84 will be recruited.
5. Participants will receive a research health screening at no cost and a token of appreciation upon completion of the screening. If you are interested in participating in the study, please email [helios@ntu.edu.sg](mailto:helios@ntu.edu.sg) for more information.

Source: First Published in The LKCmedicine newsletter on 28 August 2017. Click [here](#) to read more.

Contributed By:  
**The Lee Kong Chian School of Medicine**

## DID YOU KNOW?

Atopic eczema can be associated with metabolic disease.

Interested to know more?  
Click [here](#) to drop us a note!

## GOOD TO READ!

Peripheral Blood Gene Expression of Acute Phase Proteins in People With First Episode Psychosis

Inflammation and Psychosis: Is there a link?

Click [here](#) to find out now!

**Congratulations to the winners of the Singapore Health Biomedical Congress (SHBC) 2017 Scientific Competition!**

Please click [here](#) for the list of categories and winners.

## Annals, Academy of Medicine Best Publication Award 2016 – Gold

The award was presented to Dr Mythily Subramaniam (Director, Research Division, Institute of Mental Health) in July 2017 for the article entitled 'Prevalence of Depression among Older Adults - Results from the Well-Being of the Singapore Elderly Study' which was published in the April 2016 issue of the journal Annals, Academy of Medicine, Singapore.



*"It is an honour to be acknowledged by the Annals, Academy of Medicine, Singapore. This award is in recognition of the work that the Programme of Mental Health Policy Studies does in psychiatric epidemiology. I am very thankful to my team members who worked tirelessly throughout the study to ensure the collection of high-quality data, and my co-authors whose input made this article possible. We are hopeful that this article will add to the knowledge of depression*

*amongst the elderly in Singapore, and lead to their improved care and management."*  
– Dr Mythily Subramaniam on receiving the award.

### Abstract of the article:

Introduction: Depression is a significant public health issue across all sociodemographic groups and is identified as a common and serious mental health problem particularly among the older adult population. The aims of the current study were to determine the prevalence of depression and subsyndromal depression among older adults in Singapore.

Materials and Methods: The Well-being of the Singapore Elderly (WISE) study was a comprehensive single phase, cross-sectional survey. Stage 1 Geriatric Mental State-Automated Geriatric Examination for Computer Assisted Taxonomy (GMS-AGECAT) depression syndrome was used for this analysis. Association of depression and subsyndromal depression with sociodemographic characteristics, social support as well as comorbidity with chronic physical illnesses and quality of life was assessed.

Results: The prevalence of GMS-AGECAT depression and subsyndromal depression

was 3.7% and 13.4%, respectively. The odds of depression were significantly higher among those aged 75 to 84 (2.1) as compared to those aged 60 to 74 years and in those who had a history of depression diagnosis by a doctor (4.1). The odds of depression were higher among those of Indian and Malay ethnicities (5.2 and 3.2 times, respectively) as compared to those of Chinese ethnicity. Those with depression and subsyndromal depression were associated with more disability, poorer life satisfaction, and medical comorbidities.

Conclusion: Our study suggests that the **prevalence of depression seems to have decreased** as compared to a decade ago wherein the prevalence of depression was estimated to be 5.5%. This positive trend can be ascribed to concerted efforts across various disciplines and sectors, which need to be continually strengthened, monitored and evaluated.

Contributed By:  
**Dr Mythily Subramaniam**  
Director  
Research Division  
Institute of Mental Health

## Congratulations A/Prof Daniel Fung and team for being awarded the 2017 International Serious Play Awards, Bronze Award for the mobile application "RegnaTales"

Technology holds potential promise in delivering skills and knowledge to children using interactive features, simulations, and immersive environments.

In order to increase the motivation and engagement of children and youths to learn techniques on anger management and to potentially reach a much larger population both in clinical and non-clinical settings, a team at the Department of Child and Adolescent Psychiatry (DCAP) have developed RegnaTales, a series of mobile game applications that equip them with skills on anger management, problem-solving and social skills through the use of interactive and gamification elements.

RegnaTales was developed based on the Social Problem-Solving Skills Training (SPSST) programme for anger management (Ooi, Ang, & Lim-Ashworth, 2015) which

follows the cognitive-behavioural framework. At present, the 4 of the 6 game applications has been released in Apple iTunes stores (IOS version) namely, "The Village of Lost Expressions", "The Rage Raver", "The Illusionist" and "Abaddon".

The main objective of this game is to encourage the player to learn and execute social responsibility through the creation of fun and engaging environments in picking up skills related to anger management and social communication. Although anger is a normal emotion that everyone experiences, there are children who are unable to manage their anger. Anger can be a distressing emotion when it is exhibited for prolonged periods. Through the use of role-playing game environments, the player is encouraged to learn skills in identification of emotions and feelings, perspective taking, coping skills, empathy, pro-social

skills and problem-solving.

Regnatales is available for download at the iTunes store:

<https://itunes.apple.com/us/developer/immersive-play/id866954987>



Contributed By:  
**A/Prof Daniel Fung (Chairman, Medical Board) and Team**  
Department of Child & Adolescent Psychiatry  
Institute of Mental Health

Reference: Ooi, Y. P., Ang, R. P., & Lim-Ashworth, N. (2015). Effective Anger Management for Children and Youth: The Manual and the Workbook. World Scientific Publishing, Singapore.

## Seminar on “Prospective Cohort Studies: Rationale, Methods, and Some Examples”

A seminar on “Prospective Cohort Studies: Rationale, Methods, and Some Examples”, organised by NHG Research & Development Office, was held at the newly opened Clinical Sciences Building (CSB), Lee Kong Chian School of Medicine (LKC Medicine) on 30 August 2017. The event was organised as part of a seminar series on clinical epidemiology research, aiming to provide a platform for our clinician-scientists to exchange ideas and learn from the experts, as well as to provide an opportunity to mingle and collaborate. Over 40 attendees from NHG as well as LKC Medicine turned up at the session, which was opened by Prof James Best (Dean, LKC Medicine) and Prof Lim Tock Han (Deputy Group CEO (Education & Research), NHG).

Prof Elio Riboli (Director of the School of Public Health, Imperial College London) and Prof Paul Elliott (Chair in Epidemiology & Public Health Medicine, Imperial College London) talked about the history and methods of prospective cohort study design. They shared that a cohort design has advantages over case-controlled studies in that it gives a direct measure of disease incidence and is not constrained by methodological limitations such as study subject selection and exposure recall biases. Being observational in nature, cohort study designs would need to take into consideration possible confounding factors due to possible underlying correlations between different risk factors and disease occurrence.

Profs Riboli and Elliott mentioned that most contemporary cohorts incorporate the collection

of clinical measurements, lifestyle and medical information as well as biological samples (e.g. blood, urine, saliva) at a baseline visit and subsequently at follow ups over many years to measure for changes in lifestyle, repeated biological sampling, disease occurrence, disease evolution and progression, and death.

Several examples of major prospective cohort studies were cited, such as the Framingham study in the USA and British doctors study in UK where much of the knowledge on the causes of and risk factors for the major chronic diseases have been derived. Professors Riboli and Elliott also talked about large cohort studies in recent times, including the EPIC study across 10 European countries (<http://epic.iarc.fr/>) and UK Biobank (<http://www.ukbiobank.ac.uk/>), both of which include an excess of 500,000 people.

Prof John Chambers (Professor of Cardiovascular Epidemiology, LKC Medicine & Lead PI, Health for Life in Singapore (HELIOS) Study) followed on to present an overview of the HELIOS Study, which is a joint prospective cohort study by LKC Medicine, NHG and Imperial College London. Prof Chambers welcomed participation and collaboration from interested clinicians, especially in following up the participants in sub-studies through early disease cohort studies.

The event ended with a networking dinner, which saw interaction between the speakers and the attendees as well as between clinicians and researchers, exchange research ideas and sparking possibilities of future collaborations.



**Professor Elio Riboli**  
Director, School of Public Health,  
Imperial College London



**Professor Paul Elliott**  
Chair in Epidemiology & Public Health Medicine, Imperial College London



Contributed By:  
**Collaboration and Partnership Unit**  
**Research & Development Office**  
**National Healthcare Group**

## A Changing Landscape in the Management of Depression with Repetitive Transcranial Magnetic Stimulation

Repetitive transcranial magnetic stimulation (rTMS) was approved by the US Food and Drug Administration (FDA) in 2008 and the Institute of Mental Health (IMH) acquired this capability in 2015. This novel technique uses a rapidly changing electrical current to create a magnetic field that passes the brain for therapeutic effect. Compared to traditional neurostimulation modality - electroconvulsive therapy (ECT) - **rTMS has the advantages of circumventing the requirement for seizure induction and anaesthesia**. Generally, there is negligible major safety concerns (usually as a mild and transient headache) and does not precipitate cognitive/memory impairment.

Clinical findings suggest that **rTMS is an effective option in patients who have failed to respond adequately to one antidepressant treatment i.e. treatment-resistant depression**. The treatment for major depression involves

drug therapy, failing which physicians will turn to other alternative drug as adjunctive therapy and after which, neurostimulation. The NHG Pharmacy & Therapeutics (P&T) Office in collaboration with IMH, evaluated the cost-effectiveness of rTMS. We compared this new option to ECT.

We constructed a Markov model to project the costs and outcomes in patients with treatment-resistant depression over one year. The relative treatment effects between rTMS and ECT were obtained from meta-analyses of published trials. The effectiveness and quality of life data for patients using ECT were derived from local patients. While rTMS may not be as efficacious as ECT, it was shown to be a cost-effective option.

**rTMS is cost-effective compared to ECT in patients with treatment-resistant depression**

and offers better acceptability due to the lack of anaesthesia and impact on cognition. With rTMS, there is now an alternative for individuals who are not suited to receive ECT, for instance, pregnant and lactating (postpartum depression) women and certain patients with cardiac symptoms.

Contributed by:  
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**Adj. Asst Prof Tor Phern Chern**  
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## Reflections of a NHG Resident as a Budding Clinician Scientist

Having completed the NHG Clinician Leadership in Research (CLR) programme (now known as Clinician-Scientist Preparatory Programme (CSPP)\*), I would highly encourage any resident who is interested in research to sign up for this programme and would like to thank the programme for providing me with a strong foundation in research via a series of workshops and sharing sessions aimed to help us understand the conduct of clinical research from the study design and methodology to statistical analysis as well as equip us with writing skills for publications and grants.

My research project was on the role of handgrip strength in predicting complications in patients undergoing major hepatobiliary surgery. Handgrip strength is a non-invasive and rapid bedside test that is currently used in one of the components of

assessment of frailty and could potentially be used as a screening tool to identify frail patients who would benefit from prehabilitation prior to surgery. I realised that the conduct of a prospective trial has many challenges which includes patient recruitment and juggling of clinical time with research commitments. However, it is ultimately a rewarding journey after the completion of the research especially when results are able to impact and improve patient care and outcomes.

Equipped with the research skills obtained from the CLR programme, I was fortunate to be awarded the Young Investigator Award, 8th Colorectal Disease Symposium in Japan as well as published in several prestigious surgical journals during my residency training which includes British Journal of Surgery, American

Journal of Surgery and World Journal of Surgery.

Finally, I am most grateful to my research mentors, Dr Vishal Shelat (Consultant, Department of General Surgery, Tan Tock Seng Hospital) who encouraged me to apply for the CLR Programme and together with Associate Professor Tan Kok Yang (HOD, Department of Surgery, Khoo Teck Puat Hospital) spent countless hours guiding and mentoring me. Without the mentorship of these two selfless giants, none of my achievements would have been possible.



Contributed By:  
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FY14 CLR Programme Awardee

*The CLR Programme was revamped and renamed as Clinician-Scientist Preparatory Programme (CSPP) in 2016. For more information on CSPP, please visit [www.research.nhg.com.sg](http://www.research.nhg.com.sg) (Research Career Development → Schemes for Doctors)*

## Antibiotic and The Gut Bacterial Metagenome: A Prospective Study

Antibiotic prescriptions have effects beyond those intended. Even the most targeted treatments profoundly change the microbial communities living on the host. These changes have some familiar consequences - such as the acquisition of drug resistance, antibiotic-associated diarrhoea, and hospital-acquired infection. But they may also influence more complex systemic processes, such as blood-sugar control in diabetics, or the immune response to vaccination.

In a study funded by NHG through the Clinician-Scientist Career Scheme, we studied changes in the gut microbiome during and after antibiotic treatment. Patients admitted to Tan Tock Seng Hospital with an infection were eligible to participate, and stool samples were collected during the admission, and for three months after.

Deoxyribonucleic acid (DNA) was extracted from stool samples by Dr Tim Barkham's (Senior

Consultant, Laboratory Medicine, Tan Tock Seng Hospital) research team at the TTSH Microbiology Lab. The DNA samples were then transported to our collaborators at the Genome Institute of Singapore for sequencing and analysis.

Our aim was to describe not just the density and diversity of bacterial populations in the gut, but also to explore changes in the functional capacity of the microbiome. This involves shotgun sequencing of all bacterial DNA in stool samples. Sequences identified can be compared with databases of known bacterial genes to predict what their function is likely to be: from antibiotic resistance to metabolism or virulence. In this way, the microbiome is considered as one ecological community – a metagenome.

Recruitment for this study finished last year, and analysis of collected data is ongoing. Currently, we are focusing on determining which bacteria are

associated with a recovery of a normal host gut microbiome and using metagenomics to try to understand why. A number of bacterial species have been identified which were associated with faster recovery of a normal microbiome in our study participants. These bacteria are currently being further explored in controlled mouse studies.

If validated these bacterial species may provide a rational selection for probiotics, and have the potential to offer a treatment for gut colonisation by multi-drug resistant organisms (MDROs).



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## A Family Physician's Journey in Research and Education

I worked as a private General Practitioner for almost 10 years before joining National Healthcare Group Polyclinics (NHGP). After completion of my Fellowship of College of Family Physicians Singapore, I discovered NHGP's comprehensive initiatives available for Family Physicians. It was definitely an eye-opening experience and since then, my perception of primary care changed.

Apart from doing clinical work, I started teaching medical students and coaching post-graduate trainees. However, I realised that I was not equipped sufficiently to be an effective tutor. Being a good clinical tutor involves not only having good medical knowledge of a particular topic, but also the skills to communicate clearly and engage students to think critically and reflect on the learning experience. My curiosity in finding out the successful methods in teaching and assessing trainees in the clinical practice led me to embark on the Master of Health Professions Education (MHPE). This is a 2-year part-time programme co-organised by the Maastricht University, The

Netherlands and the Academy of Medicine Singapore (AMS).

The MHPE is largely based on distance learning, with 3 weeks of compulsory campus-based teaching per academic year. It is strongly research-oriented and encourages the use of theory-based insights while dealing with authentic educational problems. Deliverables of the programme include regular online assignments and a thesis.

The programme covers areas such as curriculum planning, factors affecting implementation of change in learning environments and educational leadership. It taught me the theoretical underpinnings of different evaluation and assessment methods and also gave me an opportunity to do an education research project that comprised both qualitative and quantitative study methods. I have learnt about drafting of research proposal, the iterative process of refining study methodology, conducting the study with

adequate time and resources, and data analysis from the research modules.

I graduated from the MHPE programme in July 2017 and hope to contribute further by sharing these research findings. With support from the organisation, there is definitely scope to conduct more educational research in primary care and collaborate closely with various health education stakeholders to provide new perspectives to the primary care health education landscape.



Contributed By:  
**Dr Richard Lee Meng Kam**  
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## Reflections of a Project Manager

I am 6 months into my role of a Project Manager at the TTSH Clinical Research and Innovation Office (CRIO), overseeing projects from the endocrinology team. A Project Manager sees a project from the start through to the end and my myriad of duties includes monitoring clinical studies on recruitment numbers, documentation and data management, tracking expenditure to ensure completeness in budget spending, etc. Teamwork, communication, idea generation and managing expectations are also important skills that a Project Manager should possess. Owing to my past experience as a researcher, my current role makes me realise the importance of good research management.

"Great teamwork moves a loaded boat easily" – this was what I witnessed during my first week at TTSH. There were many concurrent projects in my dedicated theme and what laid ahead seemed daunting. However, once I saw the fluent teamwork between my Principal Investigator and Research Assistants, I was assured that everyone knew their roles very well and were dedicated to finishing their portion of the task before handing it over to the next person. Coming to work became enjoyable, knowing that I could trust my teammates and finish the projects as planned.

Communication is an essential skill for a Project

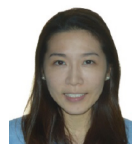
Manager. Different departments have different working styles, and being at the center of coordinating the different needs, it is pertinent for a Project Manager to be able to communicate well and in a manner that is appropriately suited to different communication styles. I have found that the best way to move things forward is by going to the personnel involved and starting with a friendly chat. As my Lead Project Manager shared, "never go to the person involved with problems, start friendly". This has been my guiding principle and so far, this strategy has worked very well!

Idea generation is something that I feel comes from our curiosity and motivation for wanting to solve problems. The biggest challenge I had during my first month here was patient recruitment for our studies. We thought that having a clinical space in a hospital would help, but when a study involves blood collection and long periods of intervention with drugs, patients think twice about participating. As participation is voluntary, I believe that we should exercise patience when educating the general public about doing something that would be beneficial for future generations. We now use this approach in the hope that our potential participants will think differently about volunteering for a clinical study in future. From this, I learnt that it is always worth trying out different ways to promote our studies to interested parties in an

amiable way while at the same time increasing awareness about the importance of volunteers.

It was after my third month at TTSH when I started to think about identifying areas which I believe I can contribute and leave a tiny footprint behind. I identified several ways to improve work processes and the management of projects and realised that it was important to pace myself because projects are around for a considerable period of time. Putting in too much effort at the beginning may result in loss of motivation as the project progresses and worse yet, burnout. A more efficient way of working would be to continuously contribute small efforts and watch them being appreciated in ways which might appear unexpectedly.

My new experience as a Project Manager has been pleasant. I hope that sharing what I have learnt so far will encourage my fellow colleagues to think about finding enjoyment at work! Cheers!



Contributed By:  
**Ms Janet Tan Suyun**  
Executive (Project Manager)  
Clinical Research &  
Innovation Office  
Tan Tock Seng Hospital

### Research Training Events

Date	Training Programme	Course Provider
Monthly	Good Clinical Practice (Online)	NHG RDO
Monthly	(PCR100) Study Start-Up: Budgeting, Case Report Form Design and Database Design	
Monthly	(PCR200) Study Conduct I: Subject Recruitment and Informed Consent	
Monthly	(PCR300) Study Conduct II : Documentation, Safety Reporting and Investigational Products	
Monthly	(PCR400) Monitoring, Audits and Inspections	
6-8 December 2017	Biostatistics	TTSH CRIO
30-31 January 2018	Good Clinical Practice (Classroom)	
6 December 2017	To Start a Research Project, How?	
29-30 January 2018	Basic and Intermediate STATA Workshop	

\*Dates are subject to changes without prior notice.

For registration and full details on courses by:

~ NHG Research & Development Office (RDO), please visit [www.research.nhg.com.sg](http://www.research.nhg.com.sg) (Training & Education → Register for Courses and Other Events)

~ TTSH CRIO, please contact Ms Siti Aisha Binte Jaffar ([Siti\\_Aisha\\_JAFFAR@ttsh.com.sg](mailto:Siti_Aisha_JAFFAR@ttsh.com.sg))

### Qualité (Issue 28, Oct 2017)

Education to facilitate high standards of research conduct

#### 1. Non-Compliance Report: Lapses in Subject Recruitment Procedures

Here we feature two case studies on non-compliances submitted to DSRB, which involved lapses in subject recruitment procedures resulting in subject complaints.

Click [here](#) to find out more.

#### 2. Responsible Conduct of Research (RCR) – Peer Review

A case study on performing peer review activities.

Click [here](#) to find out more.

Click on each of the above points to find out more