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ACCELERATING **RESEARCH**

The Academic Respiratory Initiative for Pulmonary Health (TARIPH)

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SteWARdS: Steering towards the Wise use of AntimicRobials through understanding & addressing the determinants in Singapore

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Finding Strength in Partnerships

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The Implementation Research Unit at the National Centre for Infectious Diseases

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Modifying Attentional Biases through a Smartphone App

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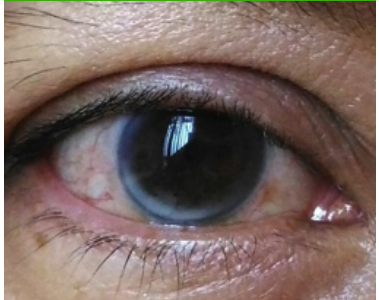
Against the Odds: Opportunities, Challenges and Triumphs of My Research Journey at NHGP

Click **here** to view more

FH CARE Familial Hypercholesterolemia: Case identification, Assessment and Reduction in adverse Events



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RESEARCH NEWS

- NHG Outstanding Citizenship Award - Asst Prof Tey Hong Liang
- Best Research Paper Award 2017 – A/Prof Mythily Subramaniam & Team
- President's Graduate Fellowship for PhD – Mr Liu Jianlin
- Congratulations to the awardees of
  - NMRC Talent Development Awards & Research Grants
  - NHG Infectious Diseases Point-of-Care Technology Grant
  - NHG-LKCMedicine Clinician-Scientist Fellowship

RESEARCH EDUCATION

- Now With A PhD!
- Research Training Events
- Qualité

Outcomes of NMRC Nov 2017 Call for Applications

Congratulations to NHG researchers who have received the National Medical Research Council (NMRC) Talent Development Awards and Research Grants during the Nov 2017 NMRC grant call. The results were announced between May - June 2018.

Name	Institution	Project Title	NMRC Grant/Award
Asst Prof Jimmy Lee	IMH / LKCMedicine	Evaluating the Clinical Utility of Immune Phenotypes in Schizophrenia	Clinician Scientist Award
Assoc Prof Melvin Leow	TTSH / LKCMedicine	Brown Fat Activation and Browning Efficiency Augmented by Chronic COld and Nutraceuticals for Brown Adipose Tissue-mediated Effect Against Metabolic Syndrome (BEACON BEAMS Study)	Clinician Scientist Award
Asst Prof Rinkoo Dalan	TTSH / LKCMedicine	Effects of Dapagliflozin and Metformin on Vascular Function in Newly-Diagnosed Treatment-Naïve Type 2 Diabetes – A Randomized Controlled Trial (DMVascular Study)	Clinician Scientist Award
Dr Chia Po Ying	NCID/TTSH	The Role of the Endothelial Glycocalyx, Mast Cells and Vascular Nitric Oxide in the Pathogenesis of Dengue	Research Training Fellowship
Dr Chan Lai Gwen	TTSH	The Trajectory of Sleep Pattern Changes after Traumatic Brain Injury, and Its Associations with Neurocognitive Outcomes and Biomarkers of Neuronal Dysfunction	Research Training Fellowship
Dr Edimansyah Abdin	IMH	Validation of the World Health Organization Disability Assessment Schedule 2.0 Among Those with Mental and Physical Illness in Singapore	Health Services Research Grant
Dr Daniel Poremski	IMH	An Evaluation of the Introduction of Peer Support Services in a Large Mental Health Hospital	Health Services Research Grant -New Investigator Grant

To find out more about NMRC Talent Development and Research Grants, please click here.

Congratulations to Asst Prof Tey Hong Liang for receiving the NHG Outstanding Citizenship Award 2018

Asst Prof Tey Hong Liang
Head of Research and Senior Consultant,
National Skin Centre
Assistant Professor, LKCMedicine

The NHG Outstanding Citizenship Award recognises NHG staff who have made immense contributions to NHG's strategic objectives and have taken on additional responsibilities outside their own portfolios.

The award recognises Asst Prof Tey's extensive research in neurodermatology (disorders of itch and deficient sweating) which has led to significant improvements in clinical practice.

Asst Prof Tey is also a **recipient of National Medical Research Council (NMRC) Clinician-Scientist Award (CSA).**

To find out more about NMRC CSA, please click here.

Congratulations to the following Awardees of the NHG-LKCMedicine Clinician-Scientist Fellowship (CSF)!

Dr Chia Po Ying
Associate Consultant
Infectious Diseases Physician
National Centre for Infectious Diseases
Tan Tock Seng Hospital

Dr Alvin Tan
Consultant
Department of Endocrinology
Tan Tock Seng Hospital

For more information, please visit www.research.nhg.com.sg (Research Career Development → Schemes for Doctors)

Outcomes of the HealthTech NTU-LKCMedicine–NHG Infectious Diseases Point Of Care Technology Grant

The inaugural Infectious Diseases Point Of Care Technology (ID POCT) Grant was jointly launched by the Nanyang Technological University Institute for Health Technologies (HealthTech NTU), the Lee Kong Chian School of Medicine (LKCMedicine) and the National Healthcare Group (NHG) in May 2017.

This call seeks to foster high quality, interdisciplinary innovations based on valid clinical needs to develop medical devices for point of care technology for rapid diagnoses of infectious diseases. It targets technologies which have passed the research stage validating basic ideas and supporting feasibility, and are ready to be moved into the clinical application stage. Projects are encouraged to aim towards securing follow-on national MedTech funding (NHIC, DxD hub, etc.), a licensing exit or adoption by the healthcare system.

After a rigorous evaluation by the Grant Evaluation Panel, 3 applications were selected for funding based on merit.

Project Title	Clinical Co-Principal Investigator	Technical Co-Principal Investigator	Co-Investigator(s)
Developing a Digital Microfluidic Point-of-Care Platform for the Diagnostics of Infection Caused by Carbapenemase Resistance in Gram Negative Bacilli	**Dr Shawn Vasoo** NCID/TTSH	**Asst Prof Zhang Yi** School of Mechanical and Aerospace Engineering, NTU	**Assoc Prof Yeo Tsin Wen** LKCMedicine, NTU
A Highly Sensitive Photoacoustical Surface Acoustic Wave (PASAW) Sensor for Early-Detection of Malaria	**Dr Shawn Vasoo** NCID/TTSH	**Assoc Prof Zheng Yuanjin** School of Electrical and Electronic Engineering, NTU	**Assoc Prof Yeo Tsin Wen** LKCMedicine, NTU
An Integrated Microfluidic Urine Impedance Cytometer for Rapid Inflammation, Pathogen and Resistance Detection	**Dr Shawn Vasoo** NCID/TTSH	**Asst Prof Hou Han Wei** School of Mechanical and Aerospace Engineering, NTU	**Assoc Prof Yeo Tsin Wen** LKCMedicine, NTU & **Asst Prof Li King Ho Holden** School of Mechanical and Aerospace Engineering, NTU

For more information about the grant, please click here.

The Academic Respiratory Initiative for Pulmonary Health (TARIPH)

On 19 March 2018, **the Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University (NTU) launched The Academic Respiratory Initiative for Pulmonary Health (TARIPH), a new national research platform to address respiratory health and disease in Singapore.** The launch, which coincided with the 2nd International Symposium on Respiratory Research, was graced by Assoc Prof Benjamin Ong (Director of Medical Services, Ministry of Health).

TARIPH's initial research programme focuses on three inter-related thematic areas. **The flagship project titled "Phenotypes of respiratory disease: A translational approach and analysis of service impact" addresses Singapore's population, while the secondary projects focus on patients and healthy people.** The projects will generate evidence on the presentation, course and consequence of respiratory illness in patients and the general population to benefit Singaporeans with respiratory diseases and enable people to enjoy better lung health. It aligns basic, translational and clinical questions from primary to tertiary care settings, through research interest groups that focus on healthy and diseased lungs, and seamlessly integrating exchanges among its various stakeholders.

By improving the understanding of factors responsible for Singapore's respiratory disease burden, researchers can assess preventative measures and optimal treatments through cutting-edge research. To do so, **TARIPH connects interdisciplinary teams with common interests, serves as a platform for the exchange of ideas and development of sustainable relationships, and provides an organisational framework for respiratory research.** At the time of the launch, TARIPH had 30 investigators – of diverse and interdisciplinary backgrounds, ranging from physiology, engineering, data analytics, epidemiology to clinical medicine that represents all stages of the bench-to-bedside chain – on board from various local and international institutions, including **Tan Tock Seng Hospital** and **National Healthcare Group Polyclinics**.

TARIPH benefits its members through activities including:

- Research collaboration workshops
- Assistance with potential collaboration across Singapore
- Facilitation of interdisciplinary initiatives
- Networking events
- National and International symposia

If you are interested to be part of the TARIPH family, click here to register. Membership is free.

For more information, please click here to visit the TARIPH web page.

Members of the TARIPH initiative stand united in their effort to help Singaporeans breathe easier
From left to right: Assoc Prof Fred Wong WS (NUS), Asst Prof Sanjay H. Chotirmall (LKCMedicine, NTU), Assoc Prof Eric Yap (LKCMedicine, NTU), Adj Assoc Prof Tan Ngiap Chuan (SingHealth Polyclinics), Adj Assoc Prof Augustine Tee (Changi General Hospital), Adj Assoc Prof Mariko Koh (Singapore General Hospital), Assoc Prof Chew Fook Tim (NUS), Prof Lim Tow Keang (NUH/NUS), Adj Assoc Prof John A. Abisheganaden (TTSH).

The Implementation Research Unit at the National Centre for Infectious Diseases

The Implementation Research Unit was established with the aim of providing expertise in facilitating and bridging existing knowledge-practice gaps in the realm of infectious diseases research at the National Centre for Infectious Diseases (NCID). Our unit will capitalise on and strengthen existing multi-disciplinary capabilities in order to develop two major service foci.

The first focus will be on **addressing the know-do gap**, which will include conducting stakeholder analysis to understand local context and system readiness; formulation of implementation research questions and study designs; and use of implementation science frameworks in the organisation of ideas and allocation of outcomes. The second focus will be on **implementation research methods** which include sampling and recruitment strategies, community-based participatory research, and monitoring and evaluation strategies.

In terms of research, our unit has been **conducting HIV-related studies, which aim to develop, implement and evaluate behavioural interventions as well as delivery of services** such as HIV self-testing, PrEP, and tele-medicine. Evidence gained from assessing the knowledge, attitude and needs/preferences of HIV self-testing among high-risk men and other stakeholders will lay the foundations in the implementation and evaluation of a HIV self-testing intervention among high-risk men in Singapore. With regards to PrEP, we have a study evaluating the acceptability, users' adherence, barriers and facilitators to utilizing PrEP, and their risk of STIs acquisition and sexual behaviours while on PrEP.

Finally, the unit is also **evaluating the acceptability and users' experiences of Telemedicine** as it can change the current paradigm of care for HIV and allow for improved access and health outcomes in cost effective ways. In addition, the unit is also l**eading a programme, entitled "Strengthening Our Community's Resilience Against Threats from Emerging infections (SOCRATEs)"**, which aims to understand our community's resilience against threats from emerging infections and develop interventions to improve their responses in times of outbreaks.

In terms of training, our unit **conducted the 2nd Implementation Science in Health Workshop in 2017 with the aim of introducing the basics of implementation research to healthcare researchers.** The workshop was attended by 16 participants representing a total of 11 local and international institutions, including National Healthcare Group, National Healthcare Group Polyclinics, Ng Teng Fong General Hospital, Saw Swee Hock School of Public Health, National University Health System, Tan Tock Seng Hospital, Eastern Health Alliance, Singhealth Health Services Research Centre, University Malaysia Sabah and Nigeria Institute for Medical Research. We will be conducting the 3rd Implementation Science in Health Workshop in early 2019, and look forward to another fruitful round of interaction between our faculty and participants.

Participants of the 2nd Implementation Science in Health workshop

Contributed by:
Dr Yap Peiling
Senior Epidemiologist
Infectious Disease Research Training Office
NCID/TTSH

Dr Wong Chen Seong
Consultant Infectious Diseases Physician
Deputy Director, National HIV Programme
NCID/TTSH

Singapore Medical Journal Best Research Paper Award 2017, Second Prize

Congratulations to Assoc Prof Mythily Subramaniam and her team for receiving the prestigious Best Research Paper Award 2017, Second Prize for the manuscript titled **"Gender differences in major depressive disorder: findings from the Singapore Mental Health Study"** published in the Singapore Medical Journal, November 2017 issue.

The paper which **highlighted key gender-specific factors associated with major depressive disorder in the local setting** was selected by a panel of experts from all articles published in SMJ in 2017. **The Award was bestowed upon the team at the Singapore Medical Association Annual Dinner** held on 12 May 2018 which the Minister for Health Mr Gan Kim Yong presided over as the Guest of Honour.

Assoc Prof Mythily receiving the award from Assoc Prof Poh Kian Keong, Editor-in-Chief of SMJ

GOOD TO READ!

Persistence of Zika virus in conjunctival fluid of convalescence patients

The epidemic of Zika fever, caused by Zika virus (ZIKAV) has been widely feared throughout the Pacific islands, the Americas and Southeast Asia. The increased incidences of ocular anomalies observed in ZIKAV-infected infants and adults may be associated with the rapid spread of ZIKAV. **Find out if the Zika virus (ZIKAV) could be spread by tears of infected patients.**

*Click **here** to read now!*

FH CARE

Familial Hypercholesterolemia: Case identification, Assessment and Reduction in adverse Events

Familial Hypercholesterolemia (FH), is a genetic disease leading to high cholesterol and higher risk for premature cardiovascular disease (CVD). **Patients with FH are over 20 times more likely to suffer CVD.** This is in contrast to patients with high cholesterol without the genetic disease, who have a 6-fold increase compared to those with desirable cholesterol levels. A definitive diagnosis of FH is usually made using DNA-based mutation testing. Despite established clinical assessment guidelines, the majority of FH cases remain undetected and under-treated. **Given an estimated prevalence of 1 in 250, about 22,000 people are estimated to have FH in Singapore, but the actual number is unknown.**

Led by A/Prof Tavintharan Subramaniam, FH CARE is an initiative currently involving Khoo Teck Puat Hospital , Admiralty Medical Centre, National Heart Centre, National University Hospital, National University of Singapore, Tan Tock Seng Hospital, Singapore General Hospital, KK Women's and Children's Hospital, National Healthcare Group Polyclinics, Changi General Hospital and Singapore Heart Foundation.

The goal of FH CARE is to involve FH patients and healthcare professionals caring for these patients in Singapore to identify patients and family members with FH and to reduce the morbidity and mortality associated with this condition through appropriate treatment. As a start, FH CARE will carry out **cascade screening for the families of patients identified with FH so as to identify affected family members who can then be initiated on the appropriate treatment.** With research funding support from Alexandra Health Fund, we have identified more than 200 patients with FH, who now have their genes sequenced for FH-causing **mutations (LDLR, APOB, PCSK9, LDLRAP1, etc).** Our current efforts are to improve awareness of FH and we will also be developing a centralised FH registry in Singapore.

An image showing arcus cornealis

Contributed by:
A/Prof Tavintharan Subramaniam
Director and Senior Consultant,
Diabetes Centre, AdMC
Deputy Director, Clinical Research Unit, KTPH

Finding Strength in Partnerships

The benefits of multidisciplinary management are well established in the clinical management of breast cancer. Collaboration between clinicians and scientists has similarly yielded fruitful discoveries that aim to fulfil the unmet needs in current clinical practice. One such long-standing collaboration between Dr Tan Ern Yu, from Tan Tock Seng Hospital (TTSH) and Dr Yu Qiang, from the Genome Institute of Singapore (GIS) A*STAR, has yielded a very exciting work. Together with Prof Lee Soo Chin, from National University Hospital (NUH), **the team has developed a novel liquid biopsy assay to detect 1q21.3 amplification in the blood of breast cancer patients.**

There is a large amount of interest in liquid biopsy assays as these assays provide information on tumour status without the need for a tissue biopsy of the tumour itself. Liquid biopsy assays are safe non-invasive, with minimal adverse effects, and are particularly valuable in instances where the tumour has been completely resected and where the tumour is deep-seated and difficult to assess. Patients testing positive for 1q21.3 amplification were found to be at high risk of relapse and a link with the IRAK1 pathway was demonstrated, raising the potential of using a novel small molecular IRAK1 inhibitor as targeted therapy in these patients.

This work was published in Nature Medicine (Nat Med. 2017 Nov;23(11):1319-1330), and is now being further explored in 3 NMRC grants. This work illustrates how such **partnerships combine the different expertise of clinicians and scientists to develop a clinically useful work** that has the potential to advance personalised medicine in current practice and improve treatment outcomes.

Contributed by:
Dr Tan Ern Yu
Senior Consultant
Dept of General Surgery
TTSH

The team (from left to right): Prof Lee Soo Chin (NUH), Dr Yu Qiang (GIS), Dr Tan Ern Yu (TTSH), Dr Goh Jian Yuan (GIS).

Congratulations to Mr Liu Jianlin for being awarded the prestigious President's Graduate Fellowship (funded by Lee Kong Chian Scholarship) for his PhD

This fellowship is awarded to candidates pursuing PhD at NUS who show exceptional promise or accomplishment in research.

For further information about the Fellowship, please click here.

Mr Liu Jianlin
Research Assistant
Research Division
IMH

Modifying Attentional Biases through a Smartphone App

Since I was a junior resident in Psychiatry, I have found myself to be very interested in research, especially on research evaluating technological solutions for psychiatric disorders. I am glad that with the support of Assoc Prof Daniel Fung (Chairman Medical Board of Institute of Mental Health (IMH)), Dr Lee Cheng (Vice-Chairman Medical Board (Clinical) of IMH /Program Director of National Addictions Management Service)) and Dr Gomathinayagam Kandasami (Chief, Department of Addiction Medicine, IMH), **I received both the National Medical Research Council (NMRC) Research Training Fellowship (RTF) and the NHG-LKCMedicine Clinician-Scientist Fellowship (CSF). Both the awards have supported me in pursuing a PhD with the Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University (NTU).**

Under the excellent mentorship of Prof Helen Smith (Professor of Family Medicine and Primary Care, LKCMedicine/NTU) and Assoc Prof Daniel Fung, **my PhD work is focused on the development, evaluation and implementation of a smartphone application for re-training of the automatic attentional biases for individuals living with addictive disorders.**

As part of this PhD, I will conduct an initial **feasibility study to examine the acceptability and potential of a smartphone application for attentional biases modification.** In the second phase, I will involve patients, clinicians, allied health professionals and application developers in the **co-design and co-development of an enhanced version of the application.** I will also evaluate the application that has been co-developed with the patients.

I hope that the research undertaken as part of this PhD will lead to the creation of a handy application, that could help individuals with addictive disorders with these automatic processes that routinely lead them to slip back or relapse back to their addiction.

For more information on the programmes, please click on the respective links below:

- *NHG-LKCMedicine CSF*

- *NMRC RTF*

Contributed By:
Dr Melvyn Zhang Weibin
Associate Consultant
National Addictions Management Service
IMH

Against the Odds: Opportunities, Challenges and Triumphs of My Research Journey at NHGP

As a nurse clinician, I could not agree more about the importance of evidence-based practice. Apart from leading and guiding the wound care team at the National Health Group Polyclinics (NHGP), my other interest is nursing research, particularly in wound care. It is challenging being a novice nurse researcher in clinical setting. And to me, conquering challenges gives me a great sense of achievement.

I saw my first yield in the research project on exploring experience of patients with chronic leg ulcer. The study results have affirmed my clinical decision on the multidisciplinary care model for chronic wound management. I was honored to present this research work at the 3rd Commonwealth Nurses and Midwives Conference in London. The paper was later accepted for publication.

After winning my spurs, research has instilled in me a passion for solving problems by scientific means with better outcomes as the end in mind. I subsequently conducted few studies on factors affecting diabetic foot wound healing and effectiveness of the nurse-led wound clinic. Knowledge gained from these studies will be adopted for improving wound care delivery in primary healthcare setting.

In early 2017, I was fortunate to be offered an opportunity to collaborate with researchers from the Lee Kong Chian School of Medicine (LKCMedicine) for a research project related to wound management. I was also invited by LKCMedicine to be a Co-Investigator for a NMRC grant application in relation to diabetic foot ulcer prevention. Recently, I was **awarded the Seedcorn Research Grant funded by NHG-LKCMedicine Centre for Primary Health Care Research and Innovation to conduct a study related to diabetic lower limb amputation.**

NHGP has provided me a good foundation and ample opportunities to pursue my passion in wound management, be it clinical or research. I have gained vast insights and left enriched with every research project that I have conducted or involved in. I will continue to pursue my passion in research to generate local evidence to better serve our population.

Contributed By:
Ms Zhu Xiaoli
Nurse Clinician (Wound Care)
Nursing Services
NHGP

Now With A PhD!

After four and a half years, I have finally returned to clinical work at the National Skin Centre (NSC), armed with a PhD in Cellular, Molecular and Biological Sciences (CMBS). I completed my studies and thesis work in the laboratory of Dr Angela Christiano at Columbia University in New York City, and had a public defense of my thesis work "JAK-STAT Signaling in Hair Follicle Stem Cells during the Murine Hair Cycle" in March 2018.

Looking back at my last contribution to Catalyst in 2013, I realised that my naïve ambition "to be a clinician who is able to think like a scientist" was easier said than done. I had truly underestimated the journey I had embarked upon, and have come to realise that I had to rewire a lot of my natural clinical impulses and instincts when it came to basic and translational scientific research.

My PhD course was rigorous, with electives and coursework that covered a breadth of topics, including virus and bacterial genomics, computational analysis of large datasets, and scientific ethics. Taking examinations every school term once more was a huge shock to the system, particularly thinking I was done with them after my exit examinations. Daily lab work entailed a lot of troubleshooting, repeating experiments, and waiting for results, which was in parts frustrating and rewarding, but mostly frustrating.

That said, now that I am on the other side of the diploma, I am extremely thankful that I have had that experience, and can proudly call myself a Clinician-Scientist. **While the basic science PhD was probably one of the hardest endeavours that I have undertaken, it was the necessary trial by fire that will equip me to take on my upcoming challenges.**

My goals now as a newly minted Clinician-Scientist at NSC are **to promote dermatology translational research, bridge collaborations between doctors and scientists, and build up the reputation of the NSC Hair Department as a centre of clinical and research excellence.** With this, I hope to increase the visibility of Singapore Dermatology on the world stage, and bring novel and inspiring treatments to our patients.

Contributed By:
Dr Etienne Wang
Consultant
NSC

SteWARdS: Steering towards the Wise use of AntimicRobials through understanding & addressing the determinants in Singapore

The rapid emergence and unimpeded increase in antimicrobial resistance has raised serious concerns about the threat of a post-antibiotic era. One major contributing factor is the inappropriate use of antibiotic. **The decision to use antibiotics is complex, involving not only a physician's propensity to prescribe antibiotics but also the interplay of psychosocial, cultural, and systemic factors among the patient, caregiver, clinical care team, and physician.** Antimicrobial resistance, which increases with age, can result in a decreased quality of life, higher morbidity and mortality risks, and increased healthcare expenditure. It is preventable through a successful antimicrobial stewardship program.

Most studies on antibiotic use and antimicrobial stewardship have been conducted in developed Western countries, where healthcare provision is a patient-centered model. A relationship-centered model could be the framework for optimal care and antibiotic prescribing in Singapore. However, to date, there is no study evaluating antimicrobial stewardship comprehensively at multiple levels throughout the continuum of care.

Through a series of mixed-methods studies involving sequential qualitative and quantitative phases carried out in the community, public and private primary care clinics, and the three largest hospitals in Singapore, **the SteWARdS study aims to explore the views and opinions of diverse stakeholders (general public, patients, caregivers, healthcare providers) to gain insights into the multi-dimensional determinants of antibiotic use and prescribing practices.**

The understanding will guide an evidence-based multi-level intervention that will align the goals of all stakeholders towards a synchronised national antimicrobial stewardship programme to reduce inappropriate antibiotic use, prevent antimicrobial resistance, and decrease healthcare costs in Singapore. With a rapidly ageing population, who is more prone to infections and inappropriate exposure to antibiotics due to atypical symptomatic presentations, such an approach is necessary to curb the rising tide of antimicrobial resistance and prevent antibiotic-resistant infections amidst the background of a dwindling antibiotic pipeline and limited healthcare resources.

The SteWARdS study is funded for 3 years by the National Medical Research Council's Health Services Research Grant. The study team is led by A/Prof Angela Chow from Tan Tock Seng Hospital (TTSH), and includes co-investigators, collaborators, and partners from the National Healthcare Group Polyclinics, National University Polyclinics, National University Hospital, Singapore General Hospital, NUS Yong Loo Lin School of Medicine, NTU Lee Kong Chian School of Medicine, Singapore Management University, National Centre for Infectious Diseases, Health Promotion Board, and grassroots organizations.

TTSH study team (from left to right): Ms Jasmine Tan (Research Assistant, (RA)), Ms Jeanette Yeo (RA), A/Prof Angela Chow (Principal Investigator), Ms Guo Huiling (Research Fellow), Ms Nur Azzriyani Binte Roslan (RA)

Contributed by:
A/Prof Angela Chow
Head and Senior Consultant, Department of Clinical Epidemiology, Office of Clinical Epidemiology, Analytics, and kNowledge (OCEAN), TTSH
Head, National Public Health & Epidemiology Unit, NCID/TTSH

Ms Guo Huiling
Research Fellow,
Infectious Disease Research Training Office, NCID/TTSH

Training Calendar

Date	Training Courses	Course Provider
Monthly	Good Clinical Practice (Online)	NHG RDO
	(PCR100) Study Start-Up: Budgeting, Case Report Form Design, Database Design*	
	(PCR200) Study Conduct I: Subject Recruitment & Informed Consent*	
	(PCR300) Study Conduct II: Documentation, Safety Reporting & Investigational Products*	
	(PCR400) Monitoring, Audits and Inspections*	
13 Aug 18	Manuscript Writing & Poster Design	TTSH CRIO
16 Aug 18	Basic SPSS Workshop	
24 Aug 18	Data Management & Questionnaire Design	
07 Sep 18	Manuscript Writing and Poster Presentation	NHG RDO
18 Sep 18	Clinical Trials: Things You Need to Know	TTSH CRIO
28 Sep 18	Basic Access for Research	
05 Oct 18	Basic SPSS Workshop	
11 Oct 18	Redcap to Build Your Database	
16 Oct 18	Health-Related Quality-of-Life Beginners	
17 Oct 18	Health-Related Quality-of-Life Advanced	
18 Oct 18	Evidence Based Medicine Core Skills for Protocol Development	NHG RDO

*Blended learning courses involving Online Lectures coupled with a Classroom Workshop on a stipulated date.

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
(Training & Education → Register for Courses and Other Events)
~ TTSH CRIO, please contact Ms Siti Aisha Binte Jaffar Siti_Aisha_JAFFAR@ttsh.com.sg

Qualité (May 2018 Special Edition)

Education to facilitate high standards of research conduct

Click on the respective points to find out more!

1. **Non-compliance: Accidental Leakage of Personal Information**
2. **Non-compliance: Transferring Personal Data Overseas**

(July 2018 Feature)

1. **Serious Non-Compliance: Collection & Use of Data Without IRB's Approval**
2. **Assessment of Eligibility of Research Subject Prior to Recruitment**

REMINDER: All HBR studies using and analysing subjects' identifiable data past 31 Oct 2018 must ensure appropriate consent is taken by 31 Oct 2018. Click HERE to read more