



e-catalyst

ACCELERATING RESEARCH



NHG Research Awards 2019



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Inaugural TTSH Research Day, Town Hall and Launch of the P.H. Feng Research Centre



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NHG and LKCMedicine Establish a Joint Translational Research Programme



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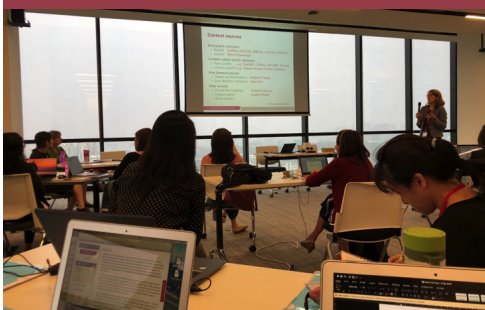
Oral Care for Patients with Dysphagia: Knowledge, Attitudes and Practices of Speech Therapists



Knowledge, Attitudes and Practices of Speech Therapists

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Expanding Research Capacity: Workshop on Systematic Reviews in Qualitative Research



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RESEARCH NEWS

- Celebrating The Research Journey
- Multi-disciplinary Primary Care Research in the Spotlight
- Singapore Health and Biomedical Congress (SHBC) 2019 Scientific Competition Winners



RESEARCHER'S FEATURE

- Factors Influencing Teamwork among Nurses in General Ward Setting: An Exploratory Descriptive Study
- Distinguished Contributor Award for Clinical Research Coordinators 2019



RESEARCH EDUCATION

- Tissue Compliance Circular
- Training Calendar
- Chicken Soup for the Busy Coordinator



NHG Research Awards 2019

Research plays an integral part in improving patient care and health outcomes, by providing insights into disease mechanisms which could in turn contribute to formulation of new treatments or interventions. The inaugural NHG Research Awards (NRA) 2019 aim to recognise outstanding research mentors, research with notable translational impact to healthcare as well as efforts to build and sustain a research culture in NHG.

The call for applications was opened from 21 May to 28 June 2019 and a total of 22 applications were received from NHG institutions for the 4 award categories. After careful deliberation by the NHG Research Awards Review Panel, the respective awards were presented to the winners at the Singapore Health and Biomedical Congress on 10 October 2019.

GCEO's Distinguished Research Mentor Award *Recognise research mentors who have made outstanding contributions with translational impact on healthcare and played a critical role in mentoring the next generation researchers.*

Prof Chong Siow Ann, Vice Chairman Medical Board (Research), IMH

Outstanding Research Mentor Award *Recognise research mentors who have contributed substantially in the training of budding researchers and are active role models to younger researchers.*

A/Prof Angela Chow, Head & Senior Consultant, National Public Health and Epidemiology Unit, NCID

Outstanding Research Impact Award *Recognise teams whose research has demonstrated a translational impact to the provision of healthcare nationally or internationally. (listed in no specific order, "*" denotes Team Leader)*

• **Familial Hypercholesterolemia: Case Identification, Assessment and Reduction in Adverse Events (FHCARE)**
A/Prof Subramaniam Tavintharan* (KTPH), Dr Sharon Peck (KTPH), Dr Sanjaya Dissanayake (KTPH), Dr Ian Koh Jan Ming (KTPH)

• **Scientific Exploration, Translational Research, Operational Evaluation of Disease Prevention and Preventive Measures Through New Treatment Strategies against Dengue (STOP Dengue)**
Prof Leo Yee Sin* (NCID), A/Prof Lye Chien Boon David (NCID), A/Prof Ng Lee Ching (NEA), Prof Ooi Eng Eong (Duke-NUS)

• **Streptococcus Agalactiae (GBS) ST283: A Regional Threat To Human and Aquaculture**
A/Prof Timothy Barkham* (TTSH), Ms Tang Wen Ying (TTSH), A/Prof Swaine Chen (NUS & GIS)

Outstanding Research Culture Award *Recognise departments who have built and sustained a vibrant research culture and attained outstanding research achievements. (listed in no specific order)*

- **Department of Anaesthesia, KTPH**, led by A/Prof Edwin Seet
- **Department of Endocrinology, TTSH**, led by A/Prof Daniel Chew

Our heartiest congratulations and well wishes to all the NRA 2019 winners!

Contributed by:

Clinician Scientist Development Office, Group Research, NHG



Guest-of-Honour Mr Edwin Tong, Senior Minister of State, Ministry of Law & Ministry of Health (left) presenting the GCEO's Distinguished Research Mentor Award to Prof Chong Siow Ann at SHBC 2019 Opening Ceremony.

GOOD TO READ!

Prevalence and Comorbidity of Migraine Headache: Results from the Singapore Mental Health Study 2016

Time to pay attention to your migraine condition!

Click [here](#) to read now!

NHG and LKCmedicine Establish a Joint Translational Research Programme

NHG and LKCmedicine inked a Memorandum of Understanding (MoU) to establish a Joint Programme for Translational Research at the Opening Ceremony of the Singapore Health and Biomedical Congress (SHBC) 2019. The Joint Programme aims **to foster and establish Joint Translational Research Centres in areas with significant disease burden in Singapore, in alignment with the research focus areas of the parties**, including but not limited to: ageing/rehabilitation, dermatology, infectious diseases, mental health, metabolic-vascular diseases, and population health. The MOU was signed by Prof Steven Thng (Clinical Director, Translational Research Office, NHG) and Prof Naomi Low-Ber (Vice-Dean, Education, LKCmedicine), and witnessed by Mr Edwin Tong (Senior Minister of State, Ministry of Law & Ministry of Health), Prof Lim Tock Han (Deputy Group CEO, Education and Research, NHG) and Prof Michael Ferenczi (Vice-Dean, Faculty Affairs, LKCmedicine).

Contributed by:

Translational Research Office, Group Research, NHG



Signing of the MoU
From left to right: Prof Lim Tock Han, Prof Steven Thng, Mr Edwin Tong, Prof Naomi Low-Ber and Prof Michael Ferenczi

Celebrating the Research Journey

The Clinician Scientist Development Office (CSDO), National Healthcare Group (NHG), organised a research track titled “**Research Celebrations, Collaborations & Connections**” during the Singapore Health and Biomedical Congress (SHBC) on 11 October 2019. Led by A/Prof Angela Chow (Head and Senior Consultant, Clinical Epidemiology, NCID / TTSH), the research track was a half-day programme that brought together Clinician-Scientists, clinician researchers and research administrators, etc to celebrate research efforts and partnerships established over the years and to seed fresh ideas and foster new research collaborations.

The first half of the programme featured the inaugural **NHG-LKCMedicine Clinician-Scientist Preparatory Programme (CSPP) Graduation Ceremony**. The ceremony saw the recognition of 5 FY2016 and FY2017 awardees' completion of the joint programme between NHG and Lee Kong Chian School of Medicine (LKCMedicine), which aims to provide clinicians



Dr Chia Po Ying (right) receiving the CSPP Graduation Certificate from CSPP Faculty Co-Chair and Track Lead, A/Prof Angela Chow

with an exposure to research in the early phase of their careers through research training and project experience. Awardees who received the graduation certificate at the ceremony were Dr Kee Kok Wai (NHGP), Dr Ngo Wei Kiong (TTSH), Dr Cao Taige (NSC), Dr Chia Po Ying (NCID, TTSH), and Dr Michael Yam (TTSH).

This was followed by a sharing session moderated by Asst Prof Sanjay Chotirmall (Assistant Professor of Molecular Medicine, LKCMedicine) that featured each awardee detailing their research experiences thus far, challenges faced in research, and future research plans beyond the CSPP.

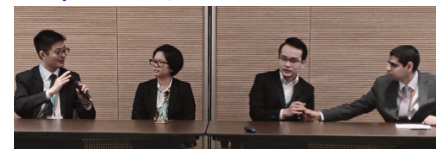
Experienced clinical researchers across healthcare professions shared insights into their research journeys in the second half of the programme, and gave advice to aspiring researchers and clinicians who had just begun their research careers. Among those invited were A/Prof Yeo Tsin Wen (Senior Consultant, NCID and Associate Professor of Infectious Diseases,



A/Prof Yeo Tsin Wen providing a brief introduction about the CSPP

LKCMedicine); Dr Sapna Sadarangani (Consultant, NCID / TTSH); Dr Xie Hui Ting (Covering Senior Nurse Educator, IMH); A/Prof Chan Mei Leng (Principal Occupational Therapist, TTSH); and A/Prof Tey Hong Liang (Head of Research and Senior Consultant, NSC). The audience interacted with the speakers in a lively Q&A session after the sharing, and learnt more about what motivated them to persevere in their research and tips on overcoming challenges.

Contributed by:
**Clinician Scientist Development Office,
Group Research, NHG**



Dr Cao Taige, Dr Chia Po Ying, Dr Kee Kok Wai and Asst Prof Sanjay Chotirmall (from left to right) sharing their thoughts on kick-starting research as a clinician



Research Journey sharing by A/Prof Chan Mei Leng

Factors Influencing Teamwork among Nurses in General Ward Setting: An Exploratory Descriptive Study

With the rapidly ageing population in Singapore, there is a pressing demand for healthcare. Nurses shoulder an increasingly heavier workload, inflating the risk of error-making or omitting nursing care. Studies conducted in the United States and Australia revealed teamwork as a significant predictor of missed nursing care, accounting for about 9 to 11% of the variance. Therefore, **a good understanding of teamwork among nurses intra-professionally is needed to reduce the occurrence of missed nursing care.**

In 2017, a nurse researcher from the Nursing Research Unit in Khoo Teck Puat Hospital (KTPH) and a Final Year Nursing Student from National University of Singapore's (NUS) Alice Lee Centre for Nursing Studies, **set out to investigate teamwork perceptions and its predictors among nurses in the general ward setting.** Participants were Registered Nurses (RNs) and Enrolled Nurses (ENs) above the age of 21, and working in an acute inpatient ward with at least six months of working experience. Participants completed a self-reported, well-validated Nursing Teamwork Survey that encompassed five subscales – team leadership, team orientation, backup, trust and shared mental model (SMM).

In our study, 248 nurses reported positively (3.65 out of 5) on teamwork among nurses. Consistent with past literature, SMM was rated the highest (3.86 ± 0.67), while team orientation was scored the lowest (3.50 ± 0.71). A multiple linear regression analysis revealed that qualification level, work experience, staffing adequacy and job satisfaction predicts 28.7% of the nursing teamwork.

Our study offers preliminary insight into nursing teamwork and its influencing factors in the Singapore general ward setting. Teamwork can be enhanced by cultivating team orientation among nurses and targeting variations among ascertained factors, which could be facilitated by nursing leaders in the clinical and education settings.

Nursing management could promote intra-professional teamwork by:

1. Implementing teamwork training in the workplace;
2. Cultivating a feedback-friendly environment; and
3. Looking into staff-mix ratio and regular work schedule.

Pertaining to the education facet, school curriculum could incorporate intra-professional teamwork and delegation to facilitate teambuilding contribution when nursing graduates enter the workforce.

This study was awarded the Singapore Nursing Award - Silver at the Singapore Health and Biomedical Congress (SHBC) Scientific Competition. Please click [here](#) to view all award winners.



Mr Cheng Ling Jie and Ms Goh Qin Ling, Pearlyn

Contributed by:
Ms Goh Qin Ling, Pearlyn, Staff Nurse, Ward A61, KTPH
Mr Cheng Ling Jie, (Principal Investigator), MPH Graduate Student, Saw Swee Hock School of Public Health, NUS
Ms Chin Guey Fong, Senior Nurse Clinician, Nursing Administration, KTPH
A/Prof Liaw Sok Ying, Associate Professor, Nursing, NUS

Multi-disciplinary Primary Care Research in the Spotlight

The annual **Primary Care Research Scientific Competition** which NHG Polyclinics (NHGP) organised in conjunction with the Singapore Health and Biomedical Congress (SHBC), was held on 26 September 2019 at Yishun Polyclinic. The winners of the competition were:

Oral Category			Poster Category		
Gold	Dr Warren Ong	NHG Family Medicine Resident, MOHH	Gold	Ms Teo Sok Huang	Research Fellow, NHGP
Silver	Ms Koh Hui Li	Research Assistant, NHGP	Silver	Dr Karen Ng	Director, Clinical Services, NHGP
Bronze	Dr Lee Eng Sing	Principal Clinician Researcher, NHGP	Bronze	Ms Liow Hui Shi	Dietician, NHGP
Bronze	Ms Julia Zhu Xiaoli	Nurse Clinician, NHGP			

The esteemed judges for this year's competition were:

- A/Prof Lim Su Chi (Clinical Director, Clinical Research Unit, KTPH);
- A/Prof Prof Ding Yew Yoong (Senior Consultant, Department of Geriatric Medicine, TTSH and GERI); and
- A/Prof Serena Koh (Programme Director (UG-Year2), Alice Lee Centre for Nursing Studies, NUS).

The judges were delighted to have witnessed the **high quality of work** presented by the primary care researchers, and emphasised that the **importance and relevance of multi-disciplinary primary care research efforts by NHGP cannot be underestimated**. Sharing their personal experiences and invaluable advice, the judges also inspired everyone who attended the competition to **persevere in their research efforts**.

“Patients with Multimorbidity – Does it always mean a lower quality of life?” by Ms Koh Hui Li, winner of Silver Award (Oral Category)

With medical advancements, patients are living longer, but not necessarily healthier. Multi-morbidity, defined as having two or more chronic conditions is now very common, but clinicians face the difficulty in treating the complexity of multi-morbidity, as chronic conditions may interact with each other. As we move towards providing holistic patient-centred care, the study aimed to find out how multi-morbidity affects patients through an assessment of their quality of life.

Observations on how age, housing type and body mass index affected the quality of life were no different from the literature. However, the study uncovered some really surprising results:

- 1) The better educated the patient was, the worse off they felt their quality of life was;
- 2) If all three chronic conditions (hyperlipidaemia, hypertension and diabetes) were not well-controlled, patients actually reported a better quality of life; and
- 3) Patients' quality of life was different if they self-reported additional chronic conditions and if the additional chronic conditions were recorded in the electronic medical records.

These results were enthusiastically discussed during the competition and the judges provided useful recommendations for future studies.

Contributed by:

Ms Teo Sok Huang, Research Fellow, NHGP
Ms Koh Hui Li, Research Assistant, NHGP

Congratulations to the winners of the Singapore Health and Biomedical Congress (SHBC) 2019 Scientific Competition!

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

Distinguished Contributor Award for Clinical Research Coordinators 2019

Ms Jaclyn Ong from the IMH Research Division received the Distinguished Contributor Award for Clinical Research Coordinators 2019 at the Singapore Clinical Research Institute (SCRI) – National University Hospital System (NUHS) Workshop held on 10 October 2019.

The Distinguished Contributor Award for Clinical Research Coordinators (CRC) is an award given in **recognition of outstanding CRCs and their significant contributions to the profession and community**. CRCs play a vital role in supporting research investigators and building a collaborative ecosystem for the execution of quality clinical research. Ms Ong was recognised for her exceptional commitment as a CRC and training instructor for cluster-wide and cross-cluster training programmes. She served as a consistent pillar of expertise to provide advice for institutional research systems.

Contributed by: **Research Division, Institute of Mental Health**



Ms Jaclyn Ong and A/Prof Teoh Yee Leong (SCRI CEO)

Inaugural TTSH Research Day, TTSH Townhall, and Launch of the P.H. Feng Research Centre

"Empowering Our Research Journey" was the theme of the inaugural **Tan Tock Seng Hospital (TTSH) Research Day**, held on 13 November 2019. The event, which brought together over 200 TTSH clinical, nursing and allied health staff, served to raise awareness about the research community, efforts and resources in TTSH.

Booths manned by the different offices which served as touchpoints for event participants to find out further about research support services available to both aspiring and seasoned researchers included:

- Clinical Research & Innovation Office (CRIO)
- Department of Ophthalmology, TTSH
- Institute of Geriatrics and Active Ageing (IGA)
- National Centre for Infectious Diseases (NCID)
- NHG Group Research
- NHG Centre for Medical Technologies & Innovations (CMTi)

The opening address by A/Prof Chin Jing Jih (Chairman Medical Board, TTSH), as well as keynote lecture by Prof Liu Jianjun (Deputy Executive Director and Senior Group Leader (Human Genetics) at A*STAR's GIS), both touched on the need for, and factors of, successful collaborations to advance research. Recipients of the NHG-LKCMedicine Clinician-Scientist Fellowship (CSF) and TTSH's



Dr Ho Eu Chin (Assistant Director of CRIO) moderating the panel session on research collaborations and support

Pitch-For-Fund Program were also presented their awards at this event.

The inaugural event culminated with a panel session moderated by Dr Ho Eu Chin (CRIO Assistant Director, Clinical Research), during which 3 experienced TTSH researchers (Dr Paul Ong, Senior Consultant in the Department of Cardiology; Sister Lathy Prabhakaran, Senior Nurse Clinician; and, Dr Aung Myint Oo, Consultant Surgeon in the Department of General Surgery), reflected on their individual research journeys to date, and shared tips to overcome common research obstacles.

TTSH Townhall, moderated by Adj. A/Prof Tan Cher Heng (CRIO Director and TTSH Assistant Chairman Medical Board, Clinical Research & Innovation), was held thereafter, building on the enriching Research Day discussions. The Townhall tagline "*Research is not an option; it is part of TTSH's mission*", was reinforced by Dr Eugene Fidelis Soh (TTSH & Central Health CEO), and A/Prof Chin, in their opening remarks. During the panel discussion that followed, the **importance of developing people, stimulating collaborations and providing strong support for research** was echoed by Prof Lim Tock Han, NHG Deputy GCEO (Education and Research), and the various leads of TTSH's research programmes and Family Groups.



Prof Lim Tock Han presents on NHG's research roadmap and strategy at the Townhall

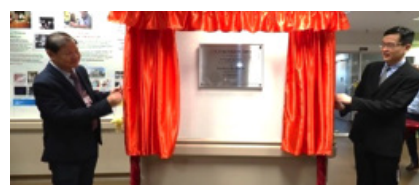
13 November 2019 also saw the **official opening of the P.H. Feng Research Centre (PHFRC)**, located on Level 2 of NCID, by Guest of Honour, Mr Frederick Chew, CEO of A*STAR, and Prof Philip Choo, NHG GCEO. The centre is named in honour of the late Emeritus Consultant, Prof Feng Pao Hsui, a luminary researcher, hospital leader and medical pioneer whose contributions in the fields of rheumatology and infectious diseases laid the groundwork for translational and clinical research in TTSH.

PHFRC aims to support and conduct high quality early phase clinical trials. The centre consolidates investigational medicine and clinical trials within TTSH, and facilitates research collaborations with academics and industry partners. The 15-bed facility, with dedicated drug and specimen processing capabilities dedicated to research, is the first of its kind to serve the NHG clinical research community. Click [here](#) to find out more about the PHFRC.

Contributed by:

Adj. A/Prof Tan Cher Heng
CRIO Director and TTSH Assistant Chairman Medical Board, Clinical Research & Innovation

Ms Sheena Nishanti D/O Ramasamy
Medical Writer, CRIO, TTSH



Prof Philip Choo (NHG GCEO), and Mr Frederick Chew (Guest-of-Honour, CEO of A*STAR), unveil the commemorative plaque to signify the official opening of the PHFRC

Oral Care for Patients with Dysphagia: Knowledge, Attitudes and Practices of Speech Therapists

It is well established that poor oral care is a significant risk factor for aspiration pneumonia. Poor oral care can result in the colonisation of pathogenic bacteria in the oral cavity. Subsequent aspiration could result in these pathogens entering the lower airway, which increases the risk of developing pneumonia. As patients with dysphagia have an increased likelihood of aspirating, speech therapists (STs) have a professional interest in reducing the risk of dysphagia-related aspiration pneumonia. STs are also in a position to detect oral diseases and enhance the oral health of patients with dysphagia. However, levels of understanding, experiences and practices vary among the STs.

A team of STs, dentists and an oral health therapist sought to explore the knowledge, attitudes and practices with regard to oral care among STs in Yishun Health. 18 STs completed an online questionnaire in June 2019 that included questions on these three areas. This questionnaire was developed by the team

based on previously published literature and clinical experience.

Findings indicated that STs in Yishun Health have a fair amount of knowledge pertaining to oral care (averaging 66.9%). Although STs strongly agreed that oral care is important for patients' clinical outcomes, there was a lack of consensus regarding their role in oral care provision and education. Key barriers to performing oral care included the lack of knowledge, uncooperative patients and inadequate time. **As a result, only half of the STs incorporate oral care provision and education frequently in their daily work.**

From this study, STs can benefit from education and training relating to oral care, as well as the development of guidelines to define their role in oral care for patients with dysphagia. As oral care delivery involves multiple stakeholders including nurses, dental staff and STs, this will facilitate the adoption of an interdisciplinary team approach in

developing a holistic oral care program.

This study was awarded the Best Poster Award - Health Professions Education (Gold) at the Singapore Health and Biomedical Congress (SHBC) Scientific Competition. Please click [here](#) to view all award winners.



Contributor & Study Team Members (from KTPH): (From left to right): (Top) Ms Clarisse Look, Ms Chloe Ang, Ms Chong Boon Keng, (Bottom) Ms Idayu Bintie Eusoff Sahab, Dr Sophia Yee, Dr Wong Kuan Yee

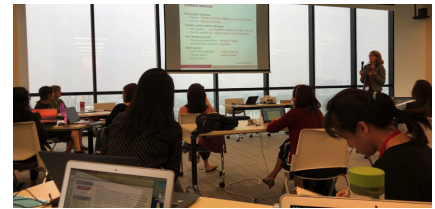
Expanding Research Capacity: Workshop on Systematic Reviews in Qualitative Research

On 3rd and 4th September 2019, 19 participants from NHG Polyclinics (NHGP), the Institute of Mental Health (IMH) and HOMER NHG Education learnt about conducting systematic reviews of qualitative research. **The two-day workshop held at the library of the NTU Lee Kong Chian School of Medicine (LKCMedicine) is part of an ongoing collaboration between LKCMedicine, NHGP and IMH to build research capacity.** This workshop aimed to equip participants with the knowledge to critically appraise published qualitative research articles, as well as the ability to develop rigorous qualitative review protocols. Asst Prof Lorainne Tudor Car and Dr Bernadette Bartlam walked the participants through the history of systematic reviews and explored the differences between multiple kinds of systematic reviews, as well as the criteria specific to assessing rigour in systematic reviews of qualitative studies.

Step-by-step guidance was provided with examples from the trainers' extensive experience. Online resources and updated methodological approaches were shared to help participants in the assessments and reviews of qualitative research. **As most participants had never done a systematic review on qualitative research before, the interactive and hands-on sessions in small groups provided a good opportunity to put their newly acquired knowledge into practice,** and all participants went away with ideas for future publishable research.

Asst Prof Tudor Car is an Assistant Professor of Evidence Based Medicine at LKCMedicine, a methods editor to the Cochrane Public Health Group and Campbell Knowledge Translation and Implementation Group, as well as a lead for the LKCMedicine PhD Programme module on systematic reviews and evidence synthesis.

Dr Bernadette is a Senior Research Fellow at LKCMedicine with expertise in qualitative and mixed methods research informed by sociological and psychological theories, and research ethics.



Assistant Professor Prof Tudor Car guiding participants through the process of conducting a qualitative systematic review

Contributed by:
Ms Evelyn Chew & Ms Elya
Clinical Research Unit, NHGP

TISSUE COMPLIANCE CIRCULAR

Brought to you by NHG Tissue Compliance Committee for NHG tissue custodians and research community

02/2019

HBRA Human Tissue Banking Regulations



Am I Affected?
What Do I Need To Do?
A 3-step guide

The Tissue Compliance Circular is a publication series initiated by the NHG Tissue Compliance Committee to disseminate information on the HBRA Human Tissue Banking Regulations to NHG tissue custodians and individuals involved in tissue banking activities.

Please click [here](#) to read the full article and previous issues.

For non-NHG tissue custodians, please refer to your respective institutions for the tissue bank application process.

Training Calendar

Date	Training Courses	Course Provider
Monthly	Good Clinical Practice (Online)	NHG RDO
	(PCR100) Study Start-Up: Budgeting, Case Report Form Design and Database Design*	
	(PCR200) Study Conduct I: Subject Recruitment and Informed Consent*	
	(PCR300) Study Conduct II: Documentation, Safety Reporting and Investigational Products*	
	(PCR400) Monitoring, Audits and Inspections*	
15 Jan 20	How to start a Research Project (Advanced)	TTSH CRIO
23 Jan 20	(PCR400) Monitoring, Audits and Inspections (Classroom)	NHG RDO
13 – 14 Feb 20	Good Clinical Practice (Classroom)	
19 Feb 20	Prognostic Model *NEW*	
26 – 28 Feb 20	Biostatistics	

*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

CHICKEN SOUP FOR THE BUSY COORDINATOR

Education to facilitate high standards of research conduct

1. Sep 2019:
How Should Research Data be Shared?
2. Oct 2019:
Important Notice on Human Biomedical Research Appropriate Consent Requirements

Click on the respective points to find out more!