RECRUS Research Newsletter

Volume 2, Issue 16, June 2022, 294 - 340



High-Quality Research, True Academics, Real Experts

IN THIS ISSUE

Breaking News

- Qualification and assessment of the Faculty Research Groups (pg. 294 - 298)
- Tips on low-cost publishing in scientific journals (pg. 299 300)
- Advanced research projects agency for health (ARPA-H)

Research Achievements and Impacts

Keypoints from CRU Associate Members (CRAMs) Department Presentation: Department of ENT and Psychiatry (pg. 302 - 307)

Clinical Epidemiology

Appraisals in Meta-Journal Hour Series 9: Prospective, Multicenter, Controlled Trial of Mobile Stroke Units (pg. 308 - 311)

Current Evidence

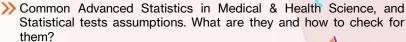
- Introduction to Digital Health: Benefits and Challenges (pg. 312 320)
- Research Colloquium Series 3: A Multicenter Study of the Relationship between Anthropometric Measurements and Hamstring Autograft Diameter in Anterior Cruciate Ligament (ACL) Reconstruction in Malaysia (pg. 321 – 321)

Announcements



- >> MJH series 11: Out-of-pocket payments for complementary medicine following cancer and the effect on financial outcomes in middleincome countries in southeast Asia: a prospective cohort study
- >>> Wanted and ready to do a Cochrane systematic review?

[Early announcement]



[Calling for registration]

- >> Artificial Intelligence in Healthcare: A Discussion with Experts
- >> Research Colloquium Series 4
- >>> Research Development Workshop, 25-26 August 2022

[Calling for registration]

- >>> Upcoming Conference and Congress
 - 6th International Clinical Trials Methodology Conference 2022
 - 9th International Congress on Peer Review and Scientific Publication, Chicago IL
 - 9th Asia Pacific Primary Care Research Conference, 1 3 December 2022
- >> Quantitative Methodology Workshop for Health Research by The Research Office (RO) and Universiti Malaya Primary Care Research Group (UMCPRG), Faculty of Medicine (UM)

FRO M THE EDITOR'S DESK

Following the new university's policy on the journal publication fund (the Dana Penerbitan Jurnal, DPJ), check out my response to that in Tips on low-cost publishing in scientific journals. Check out also the cited references especially the briefing recording and sharing information from the Research Management Centre. If you want more on the management and actual cost in science publishing, read on the article by Richard Van Noorden in Nature on March 2013.

For faculty's and HPUPM's staff who are in the Faculty Research Groups (FRG), University Research Groups (URG) and Research Centre of Excellence (RCOE), check out the Qualification and assessment of the Faculty Research Groups from the Deputy Dean's Office (Research and Internationalization).

Join us to applaud and cherish the achievements and sharing from the Department of ENT and Psychiatry! Many research achievements are indeed remarkable, and many interesting and potential research within the departments and with others are exciting. The challenges and strategies to overcome them were dearly appreciated.

The written appraisals from the Meta-Journal Hour (MJH) Series 9 on the Prospective, Multicenter, Controlled Trial of Mobile Stroke Units is worthy of serious consideration by Malaysian hospitals on setting up mobile stroke units.

Check out the Introduction of Digital Health - Benefits and Challenges from the first talk over a series of initiative by CRU to explore the best path forward in digital transformation of healthcare including hospitals. There is an outline of the activities on the Digital Health Research initiative with UPM's Faculty of Computer Science and Information Technology, and if you are an enthusiast of digital health and research do join the invitation to be a group member in the Digital Health Avantgarde. This issue also publishes the abstract from Research Colloquium series 3 on A Multicenter Study of The Relationship Between Anthropometric Measurements and Hamstring Autograft Diameter In Anterior Cruciate Ligament Reconstruction In Malaysia.

Check out the many upcoming research-related activities at the end pages of the newsletter including the Common Advanced Statistics in Medical & Health Science, and Statistical tests assumptions: What are they and how to check for them? and the Research Development Workshop 25-26 August + 3-month by experts from UPM including Professor Dr. Sherina Mohd Sidek, Dr. Irmi Zarina, Professor Dr. Johnson Stanslas, Associate Professor Dr. Zahira Mohd. Ishan and Professor Dr. Amin Ismail and myself.

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BREAKING NEWS

KENYATAAN RINGKAS MENGENAI MATLAMAT 1: MEMPERKUKUH PENYELIDIKAN BERIMPAK TINGGI BAGI OBJEKTIF 1: MEMBANGUNKAN KUMPULAN PENYELIDIKAN BERIMPAK TINGGI

Sebagai makluman yang dinyatakan di dalam buku Pelan Strategik Penyelidikan FPSK 2021-2025, matlamat yang pertama adalah 'Memperkukuhkan Penyelidikan Berimpak Tinggi'. Oleh itu, untuk merealisasikan matlamat tersebut, terdapat (4) empat objektif dan (7) tujuh sasaran keberhasilan yang perlu dicapai oleh Fakulti. Objektif strategik yang pertama adalah 'Membangunkan Kumpulan Penyelidikan yang Berimpak Tinggi'. Justeru, YBhg.Prof./Dato'/Datin/Dr./Tuan/Puan dimohon untuk mengenalpasti kumpulan penyelidik di jabatan yang menepati kriteria bagi menyertai Kumpulan Penyelidikan Berimpak Tinggi Fakulti Perubatan dan Sains Kesihatan. Maklumat lanjut seperti di bawah:

Peringkat	Status	Akronim	Sasaran
1	Faculty Research Group	FRG	20
2	Faculty High Impact Research Group	FHIRG	3
3	University Research Group	URG	3
4	Research Centre of Excellence	RCoE	3
5	Higher Institution Centre of Excellence	HiCOE	1

PENILAIAN

- Kumpulan-kumpulan penyelidik yang dibentuk akan dinilaikan berdasarkan key main indicator yang terkandung di dalam instrumen yang diberi. Penilaian tersebut perlu dicapai secara jumlah minimum yang terkumpul dalam tempoh 1/2 tahun untuk melayakkan mereka ke peringkat seterusnya.
- Berikut adalah JUMLAH MINIMUM PENILAIAN bagi setiap peringkat kumpulan penyelidik seperti pada jadual berikut:

Peringkat	Status	Akronim	Jumlah minimum yang perlu dicapai
1	Faculty Research Group	FRG	35%
2	Faculty High Impact Research Group	FHIRG	45%
3	University Research Group	URG	55%
4	Research Centre of Excellence	RCoE	65%
5	Higher Institution Centre of Excellence	HiCOE	

1) SYARAT-SYARAT UNTUK MELAYAKKAN DIRI MENYERTAI FACULTY RESEARCH GROUP (FRG):

Name of the group:

Department:

Name of individuals in the group with field of expertise:

No.	Main key indicator	Criteria	Fullfill? Yes/No
1	Academician (Permanent)	5	
2	Academician as PI in the main research grant	1	
3	Staf with PhD/Professional Qualification	70%	
	Publication		
4	Cumulative index citation	200/ group	
5	Percentage of publication in Q1 & Q2 JCR	20%/ group = 1 article	
h	No. of publication in SCOPUS/WOS/ERA index	6	
	Research Grant		
	Total grant allocation (government/private/international)	RM50k	

2) SYARAT-SYARAT UNTUK MELAYAKKAN DIRI MENYERTAI FACULTY HIGH IMPACT RESEARCH GROUP (FHIRG):

Name of the group:

Department:

Name of individuals in the group with field of expertise:

No	Petunjuk Prestasi Utama	Benchmark parameters for FHIRG Year 1-2	Fulfill? Yes/ No
A1	Bilangan staf Akademik (Tetap)	5 orang (minima)	
	Bilangan staf akademik (Bersekutu)	Tiada minima	
	Bilangan staf sokongan	Tiada minima	
A2	Bilangan pelajar pasca siswazah sepenuh masa yang berdaftar	Tiada	
А3	Bilangan graduan Doktor Falsafah (PhD) pada tahun dinilai	Tiada	
B1	Bilangan staf akademik yang menjadi penyelidik utama geran penyelidikan	1	
B2	Staf yang mempunyai PhD/Professional Qualification	70%	

B4	Anugerah/kepengurusan yang dikurniakan oleh persatuan ilmiah/ professional di peringkat nasional atau antarabangsa untuk kecemerlangan penyelidikan	*Bonus				
C1	Penerbitan					
	a (i). Sitasi terkumpul penerbitan diindeks	200 citations				
	a(ii). Peratusan penerbitan yang diterbitkan di dalam jurnal Q1 & Q2 dari JCR	30%				
	b (i) Bilangan penerbitan yang diindeks di dalam SCOPUS/WOS/ERA	8				
	b (ii) Bilangan prosiding pasca persidangan yang diindeks dalam SCOPUS/WOS/ERA					
	c. Bilangan penerbitan lain-lain					
	d (i) Bilangan buku penyelidikan	Optional				
	d (ii) Bilangan bab di dalam buku					
	e. Bilangan kertas polisi					
	f. Penerbitan lain-lain					
C2	Geran penyelidikan					
	a. Jumlah peruntukan dana awam (agensi kerajaan)					
	b. Jumlah peruntukan dana swasta (termasuk penyelidikan kontrak)	RM50K				
	c. Jumlah peruntukan dana antarabangsa					
E1	Paten Produk					
	a. jumlah bilangan paten	Tiada				
	b. Jumlah bilangan paten yang telah difailkan	Tiada				
	c. Jumlah bilangan produk/proses yang telah dipatenkan	1/ tahun				
	d. Jumlah bilangan produk/ proses yang telah difailkan	4/ tahun				
E2	Produk dikomersilkan	2/5 tahun				
E3	Teknologi pengetahuan yang dilesenkan	1/ tahun				
E4	Jumlah bilangan IPR selain daripada paten (eg:copyright, industrial design, circuit, pelan bangunan, software, new microbial species yang dihasilkan oleh akademik)	3/ tahun				

SYARAT-SYARAT UNTUK MELAYAKKAN DIRI MENYERTAI UNIVERSITY RESEARCH GROUP (URG):

Name of the group:

Department:

Name of individuals in the group with field of expertise:

No	Petunjuk Prestasi Utama	Benchmark parameters for URG	Fulfill? (Yes/No)
A1	Bilangan staf Akademik (Tetap)	5 orang (minima)	
	Bilangan staf akademik (Bersekutu)	Tiada minima	
	Bilangan staf sokongan	Tiada minima	
A2	Bilangan pelajar pasca siswazah sepenuh masa yang berdaftar	Tiada	
A3	Bilangan graduan Doktor Falsafah (PhD) pada tahun dinilai	Tiada	
	Bilangan staf akademik yang menjadi penyelidik utama	15% Putra Grant & National	
B1	geran penyelidikan	20% Industry & International	
B2	a. Bilangan staf yang mempunyai akademik yang berkelulusan tinggi (PhD/DBA/MMed/DPharm etc.)	70%	
	b. Bilangan staf yang mempunyai kelayakan professional (Professional Qualification) (doctor, engineer, architect, accountant etc.)	10%	
В3	Pengalaman penyelidikan (2 kohort)	50% A; 50% B (Kohort A: > 46 thn; Kohort B: < 45 thn)	
B4	Anugerah/kepengurusan yang dikurniakan oleh persatuan ilmiah/ professional di peringkat nasional atau antarabangsa untuk kecemerlangan penyelidikan	3 International; 1 National	
64	David Maria		
CI	Penerbitan a (i). Sitasi terkumpul penerbitan diindeks	200 / staf / 5 tahun	
	a(ii). Peratusan penerbitan yang diterbitkan di dalam jurnal Q1 & Q2 dari JCR	50%	
	b (i) Bilangan penerbitan yang diindeks di dalam SCOPUS/WOS/ERA 4/staf		
h (ii) Bilangan prociding pasca persecidangan yang diindeks		1/staf	

	c. Bilangan penerbitan lain-lain	2 /staf	
	d (i) Bilangan buku penyelidikan	0.2 /staf	
	d (ii) Bilangan bab di dalam buku	0.2/ staf	
	e. Bilangan kertas polisi	1 / 5 tahun	
	f. Penerbitan lain-lain	2 /staf	
C2	Geran penyelidikan		
	a. Jumlah peruntukan dana awam (agensi kerajaan)	RM 40, 000	
	b. Jumlah peruntukan dana swasta (termasuk penyelidikan kontrak)	RM20,000	
	c. Jumlah peruntukan dana antarabangsa		
E1	Paten Produk		
	a. jumlah bilangan paten	Tiada	
	b. Jumlah bilangan paten yang telah difailkan	Tiada	
	c. Jumlah bilangan produk/proses yang telah dipatenkan	1/ tahun	
	d. Jumlah bilangan produk/ proses yang telah difailkan	2/ tahun	
E2	Produk dikomersilkan	1/5 tahun	
E3	Teknologi pengetahuan yang dilesenkan	1/ tahun	
E4	Jumlah bilangan IPR selain daripada paten (eg:copyright, industrial design, circuit, pelan bangunan, software, new microbial species yang dihasilkan oleh akademik)	2/ tahun	
F1	Pendapatan kasar melalui perkhidmatan memberi latihan	RM20,000/staf	
F2	Pendapatan kasar melalui perkhidmatan professional	RM 20,000/staf	
F3	Pendapatan kasar melalui penyelidikan secara kontrak atau perundingan	RM 100,000/staf	
F4	Endowmen (termasuk kerusi professional)	RM200,000/5 tahun	
F5	Pemberian (dana peralatan, bahan penyelidikan) bernilai ≥Rm3,000 serba satu	RM200,000/5 tahun	
G1	a. Bilangan kontrak perniagaan MOU/MOA	1	
	b. Bilangan penulis bersama	5	
	c. Bilangan kerjasama baharu	1	
	d. Bilangan pertukaran staf melalui program sangkutan	1	
	e. Bilangan prasarana kegunaan bersama	1	
	f. Bilangan penwujudan prasarana baharu hasil kerjasama dengan industri/pihak luar	1	
H1	Prasarana fizikal	RM200,000/tahun	
H2	Kualiti		
	a. Akreditasi perkhidmatan teras	1	
	b. Pensijilan QMS	1	
		1000/	
	c. Penentukuran peralatan atau kepatuhan kepada spesifikavsi	100%	

TIPS ON LOW-COST PUBLISHING IN SCIENTIFIC JOURNALS

By: Assoc. Prof. Dr. Chew Boon How Head of Clinical Research Unit, HPUPM

Publishing completed research in scientific journals is one of the disseminations to share findings with a wider audience for many purposes. Scientific progress builds on this kind of sharing and effort is informed, focused, and garnered throughout the world to solve a problem in the lives of humankinds. This is almost compulsory and ethically congruent to publish completely all the results from research that were powered for all the objectives and through the pre-specified analyses as stated in registered or published study protocols. However, this most basic requirement faces challenges in affordable and publication as well as reaching the widest possible scientific community due to the relative hefty article processing charges (APC) and peer-review process. The cost of APC is increasingly prohibitive to many academics with the economic downturns in the world today. This is intensely felt by UPM and HPUPM with recent revised policy on the journal publication fund (the Dana Penerbitan Jurnal, DPJ)[1].

In this article, some sound tips are provided to continue publishing your research in medical journals. These take into account the third article by the DPJ, professional age of the academics for initial scientific experience and job confirmation, speed-to-publication in certain research areas and disciplines, and a belief that citation is equally good if not better for articles in the 'traditional' subscription medicine and health journals compared to those open-access (OA) journals [2], and the impact factors of the journals are not the metric to be accrued for most articles in them [3].

The tips in descending order are:

Consider free Scopus-indexed journals if journal ranking is less of a concern to the young academics and authors.

No APC journals if speed-to-publication, length of the manuscript and the research from where the reports are derived are judged to be of high-quality. These quality indicators include a systematic review, randomised controlled trial, big dataset, important or expensive outcomes, long follow-up (> 12 months), relevant topics and sound designs are strongly justified and fully described, respectively.

When speed-to-publication is important because of the research topics and outputs that may concern for being the first in the world, journals that have a track record in rapid and reliable editorial processing disregard of APC could be considered. However, many traditional' subscription clinical and biomedical journals have proven to be as efficient as the OA journals during the COVID-19 pandemic [3].

OA journals with APC if availability of research grants, or their publishers are being subscribed to by own institution where a waiver or discounted APC is given for an agreed period.

OA journals could be the option when qualified for the DPJ and pressing for time to meet the institution's annual key performance index in publication. OA journals are generally known to have higher acceptance rates, but beware they are not much faster in editorial processing, and many are operating as or like the predatory journals [5].

Most importantly, the forever success factors getting research to publication are well-written reports from well-conducted research. The former the meets comprehensive reporting as required by the many already available checklists [6]. The latter comprises careful and sound research planning right from research topics of gapfilling or ground-breaking, choosing the right expertcollaborators, public and patients (end-users) involvement in the planning, usina the right theoretical data collection design, methods and statistical analyses. **Foundational** knowledge for an experiential skills in high-quality research and successful publication are possible [7,8].



References

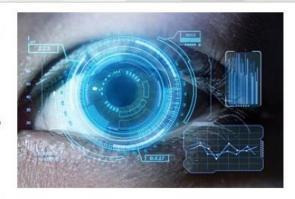
- DPJ document and recorded session for UPM staff<u>:https://drive.google.com/drive/folders/1QTIRtMH5ol5Jiabxywi5a9Gwov</u> Y41wGq?usp=sharing
- Björk BC, Solomon D. Open access versus subscription journals: a comparison of scientific impact. BMC Med. 2012 Jul 17;10:73. doi: 10.1186/1741-7015-10-73.
- Triggle CR, MacDonald R, Triggle DJ, et al. Requiem for impact factors and high publication charges. Account Res. 2022 Apr;29(3):133-164. doi: 10.1080/08989621.2021.1909481.
- Jung RG, Di Santo P, Clifford C, et al. Methodological quality of COVID-19 clinical research. Nat Commun. 2021 Feb 11;12(1):943. doi: 10.1038/s41467-021-21220-5.
- Salwana Ahmad. What is a predatory journal? RECRUS Res. Newsl. 2022, 2(14): 245.
- 6. The Enhancing the QUAlity and Transparency Of health Research (EQUATOR) Network. https://www.equator-network.org
- Good Science in Clinical Trials. Keypoints from the forum discussion with Prof Dato' Dr. Nik Hisamuddin Nik Ab Rahman, Prof. Dato' Dr. Adeeba Binti Kamarulzaman and Datuk Prof. Dr. Looi Lai Meng
- Research Development Workshop, <u>25-26 August 2022</u>. RECRUS Res. Newsl. 2022, 2(16): xxx-yyy.



ADVANCED RESEARCH PROJECTS AGENCY FOR HEALTH (ARPA-H)

President Biden proposed the creation of the Advanced Research Projects
Agency for Health (ARPA-H) to improve the U.S. government's ability to speed
biomedical and health research. Public Law 117-103 was enacted on March
15, 2022, authorizing the establishment of ARPA-H within the U.S.
Department of Health and Human Services.

Recent advances in biomedical and health sciences—from immunotherapy to treat cancer, to the highly effective COVID-19 vaccines—demonstrate the strengths and successes of the U.S. biomedical enterprise. Such advances present an opportunity to revolutionize how to prevent, treat, and even cure a range of diseases including cancer, infectious diseases, Alzheimer's disease, and many others that together affect a significant number of Americans.



ARPA-H will support transformative high-risk, high-reward research to drive biomedical and health breakthroughs—ranging from molecular to societal—that would provide transformative solutions for all patients.

The proposed mission of ARPA-H could be to make pivotal investments in break-through technologies and broadly applicable platforms, capabilities, resources, and solutions that have the potential to transform important areas of medicine and health for the benefit of all patients and that cannot readily be accomplished through traditional research or commercial activity.

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RESEARCH ACTIVITIES REPORT CRU ASSOCIATE MEMBERS (CRAMS) AND CLINICIAN SCIENTIST COTERIE (CSC) FOR SERIE 2/2022

SHARING FROM CRAMS

By Salwana Ahmad



CRAMs Online Meeting was held every 2 months among CRAMs Members, Clinician Scientist Coterie (CSC) Members and staff among Hospital Pengajar, UPM and Faculty of Medicines and Health Sciences, UPM. This session was intended for the CRAMs members to share their research activities in the department and how they are coping with all the coming challenges and strive to keep moving forward. During the session, the members will have to present their research activities report comprising of remarkable research activities and outputs, promoting positive perceptions and motivation for facing challenges, improving clinical research, and cultivating research & networking. In light of cultivating the spirit of research and knowledge sharing, here are the summaries of the presentation shared for all of us to get to learn how is everyone is doing in proceeding with the quality research in UPM.



DEPARTMENT OF OTORHINOLARYGOLOGY, HEAD AND NECK SURGERY (ENT) – CONSULTATION AND TREATMENT WISE.

Background:

The ORL head and neck surgery department was first established as a unit under the department of surgery in Faculty of medicine and health sciences in the year 1998. It was subsequently upgraded to become a full-fledged department in 2020. Currently, the department has a combined total of 10 lecturers and clinical specialists who are specialized in the field of ORL and head and neck surgery. Clinical services and clinical teachings are conducted in Hospital Serdang as well as Hospital Pengajar UPM. Among the clinical services available are consultation and treatment for ear nose throat diseases; head and neck diseases involving the oral cavity, thyroid gland, salivary gland, lymph nodes, upper aero digestive tract; voice disorders; audiology and speech therapy.

CRAMs Member: Assoc. Prof. Dr. Sethu Thakachy Subha



CRAMS Member. Assoc. Prof. Dr. Sethu Thakachy Su

REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

Publications:

The department has encouraged all team members to establish good reputation in research by having Good Clinical Practice certified for its 9 lecturers. A research target has been created to ensure that the direction towards publishing good journal and getting high reputation in research as such:

- Target for publications among all team members: 22.5% with minimum of 1 CIJ publication per lecturer per year
- 2021 achievement : 5.75%

Achievements:

✓ 5 CIJ journals were published, 2 new papers were accepted, 19 other papers were submitted, 3 papers already on press and 19 efforts for submission have been made for publication. However, 2 papers had been rejected form journal. Congratulations to Dr. Loh Tze Liang and Dr. Khairina Khairuddin for the publication with 5 in total!

PI and SA	Target CIJ	Achieved CIJ	Active grants Ongoing
Assoc. Prof. Dr. Sethu Thakachy Subha	3	3 (+2 in press, 4 submitted)	RM 78,6950
Dr. Atiqah Farah Zakaria	3	(1 in press ,2 submitted)	
Dr. Loh Tze Liang	3	3	
Dr. Noor Liza Ishak	3	(2 submitted)	RM 45, 300
Dr. Azlan Iskandar Ishak	3	(1 submitted)	
Dr. Fong Voon Hoong	3	(1 submitted)	RM 59,830
Dr. Mohd Hazmi Mohamed	3	(1 submitted)	RM 46, 600
Dr. Nurfarissa Hussin	3	(1 submitted)	
Dr. Nor Khairina Binti Khairuddin	3	(2 submitted)	
Dr. Zuraini Mohammad Nasir	1.5	2.75 (+3 submitted)	
Total	22.5	5.75	

Current Research Project:

Lecturer	Research Project	Duration	PI/CO	Ongoing / Completed	Source of research fund
Assoc. Prof. Dr. Sethu Thakachy Subha	Investigating the Relationship between Selected miRNA Differentially Expressed with PD-1, PD-L1 on Severity of Staging, Grading and Recurrence Rate of Head & Neck Epithelial Malignant Tumours	2018-2022	PI	On-going	UPM Grant Putra RM50,000
	Detection of viruses other than SARS-CoV-2 in COVID-19 suspected patients during the outbreak in Malaysia. NMRR-20-3118-56910	2020-2022	PI	On-going	Applied for IPS Grant & Seaohun Grant - rejected
	Influence of the immunogenetic environment on survival of induced leukemic cells .NMRR-17-2697-38131	2017-2021	СО	Completed	On-going FRGS Grant RM 168000
	Clinically actionable genes for the management of nasopharyngeal carcinoma	2018-2022	СО	On-going	MOH Grant RM. 736950
	Impact of Obstructive sleep apnoea on patients with open angle galucoma in a tertiary hospital in Malaysia .9661400 NMRR-18-2796-43737	2018-2022	со	On-going	UPM Grant Putra RM50,000
	Elucidating the correlation and the role of microRNA and mitochondria in the development of cancer stem cells and carcinogenesis.	2020-2022	СО	On-going	FRGS grant RM.239000 On-going
	Elucidating the roles of Epstein-Barr virus strains in clinicopathological characteristics of nasopharyngeal carcinoma in Malaysian population by evaluating the differential expression of mRNA, microRNA and long non-coding RNA.	2022-2025	PI	Public	FRGS
Dr. Noor Liza Ishak	Role of Narrow Band Imaging as a Diagnostic Tool in Patients with Laryngoharyngoreflux	2020-2022	PI	On-going	UPM GERAN PUTRA RM45,300
Dr. Mohd Hazmi Mohamed	Neurocognitive Impairment Screening Amongst Obstructive Sleep Apones Patients	2017-2021	PI	Completed	UPM, GERAN PUTRA RM46,600
Dr. Fong Voon Hoong	Elonide vs nasonex comparative study	2020-2022	PI	On-going	Private-Industrial HOE PHARMACEUTICALS SDN. BHD RM59,830.00
Dr. Mohd Hazmi Mohamed	Effect of antioxidant and Neurotrophic Vitamin B in Subjects with tinnitus -EFFORT		PI	Public	Innovation Seed Fund 2022
Dr. Nurfarissa Hussin	Observational study to evaluate the actual use and effectiveness of Dymista nasal spray in Asian patients.		PI	Industry	

Attended Conference:

Lecturers	Topics	Conference
Assoc. Prof. Dr. Sethu Thakachy Subha	-Risk factors and management of paediatric rhinosinusitis patients Sialendoscopy: A Paradigm Shift in the Treatment of Obstructive Salivary Gland Disease	EAACI HYBRID CONGRESS 2021 ASEAN ORL-HNS Congress
Dr. Atiqah Farah Zakaria	Silent massive bleeding from an ectopic lingual thyroid: A case report	Asean Society Head and Neck and Oncology (ASHNO) Conference 2021
Dr. Noor Liza Ishak	Prevalence of laryngopharyngeal reflux and its associated factors among staff of FMHS UPM	ASHNO) Conference 2021
Dr. Azlan Iskandar Ishak	Overcoming severe upper airway obstruction with lingual tonsillectomy: A case report	ASHNO) Conference 2021
Dr. Mohd Hazmi Mohamed	Prevalence and factors associated with dizziness and imbalance among elderly with healthy ageing in Malaysia. Factors associated with neurocognitive impairment amongst obstructive sleep apnoea patients.	ASHNO) Conference 2021
Dr. Nurfarissa Hussin	Infected fungal ball in concha bullosa: A rare cause of headache	ASHNO) Conference 2021
Dr. Zuraini Mohammad Nasir	Correlation between quantitative laryngeal electromyography and voice assessment in unilateral vocal fold paralysis	ASHNO) Conference 2021

Completed Research Project:

Lecturer	Research Project	Duration	PI/CO	Ongoing / Completed	Source of research fund
Assoc. Prof. Dr. Sethu Thakachy Subha	Novel Multidisciplinary Salivary Gland Society (MSGS) Questionnaire: An International Consensus.	Sept 2019 to Feb 2020	CO	Complete d and published in Q1	Hospital University Geneva, Switzerland
	A new screening tool to monitor Radioiodine complications. (As Co-researcher) Project ID-2019-00253	Sept 2019 to Feb 2020	CO	Complete d and published in Q2	Hospital University Geneva, Switzerland

PROMOTING POSITIVE PERCEPTIONS AND MOTIVATION FOR FACING CHALLENGES, IMPROVING CLINICAL RESEARCH, and CULTIVATING RESEARCH & NETWORKING.

Challenges in move forwarding for continuous research activities and how to improve clinical research:

- The researchers were having difficulty in finding students in which some of them are currently in forthcoming semester.
- There were limited public research grant funds available and the change in getting are less due to competitiveness..
- Students were not able to carry out research due to unavailability of research grant allocation for students.
- It was not easy to practice research culture due to execute busy schedule.
- It was hard

In promoting positive perceptions and motivations for improving clinical research and cultivating research, Dr. Subha mentioned in her sharing that few strategies had been implemented: as such:

- Improve in number for grant proposal submission.
- Provide more research-supporting workshop to help members improve skills and knowledge.
- The department also had dedicated writing session to help team members improve the skill and knowledge while writing continuously.
- Promote to find and share alternative resources from outside to help with the research in department.

DEPARTMENT OF PSYCHIATRY - HOLISTIC AND COMPREHENSICE SERVICES

Background:

The Department of Psychiatry provides services in psychiatry and clinical psychology for the public that includes adults, children, adolescents and elderly individuals. The service provided comprises an outpatient clinic and ward admission for acutely ill patients. The department also provides the facilities for teaching undergraduate medical program, psychiatry specialty and postgraduate clinical psychology programs that are offered by Universiti Putra Malaysia (UPM), research activities and consultation in the field of psychiatry. The service in psychiatry is provided by a group of specialists, medical officers and paramedic staff who are highly dedicated and committed to deliver the service that is holistic and comprehensive. In addition, the department is also committed to conduct programs that can help in the prevention of mental health issues through health education to the public. Overall, the department has aimed to provide services of psychiatry and clinical psychology that is in line with Hospital UPM tagline ie: Providing Extraordinary Care Together.

CRAMs Member: Dr. Ruziana Masiran



REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

Past Research Projects:

Research Project	Duration	Source of research fund/Achievement
A Multicentre, Randomised, Double-blind Study To Evaluate The Efficacy, Safety, and Tolerability of Oral Aripiprazole/Escitalopram Combination Therapy in Patients With MDD	2011	
A Multicentre, Active-controlled, Double-blind, Parallel Group-comparison Trial to Investigate the Efficacy and Safety Aripiprazole IM Depot (OPC/14597MD) Compared with Aripiprazole labels in patients with Schizophrenia	2011	
Phase 3, Multicenter, Randomised, Double-blind, Placebo-Controlled Trial to Evaluate the Efficacy, Safety and Tolerability of Brexiprazole (OPC-34712) as Maintenance Treatment in Adults with Schizophrenia	2012	
Efficacy and Safety of Agomelantine for 12 weeks in non-depressed outpatients with Generalised Anxiety Disorders	2012	
A Long-term, Phase 3, Multicenter, Open-label Trial to Evaluate the Safety and Tolerability of oral OPC-34712 as Maintenance Treatment in Adults with Schizophrenia	2012	
Development Of A Cognitive Vulnerabilities Model For Psychological Problems In Adolescents: Attachment And Negative Life Events As Predisposing Factors	2016	 FRGS, 2 years, RM 59, 200 2 publications 1 conference proceeding 1 student

Current Research Projects:

Research Project (Public Grant)	Duration	Source of research fund/Achievement
Effectiveness of Optimal Health Program in Improving Self-Efficacy in Patients with Diabetes in Putrajaya, Malaysia	2018-2022	Geran Putra GP-IPS (RM 24, 040) 2 publications
Efficacy of Cognitive Behavioral Therapy on Psychological and Clinical Parameters among Thalassemia Adolescents in Selangor: A Randomised Controlled Trial	2019-2022	Geran Putra GP-IPS (RM 25, 000)
Efficacy of Incredible Years Parenting Intervention for Children with Behavioural Problems in Malaysia: A Randomized Controlled Trial	2018-2022	Geran Putra GP-IPM(60, 000) 2 publications
Prevalence and Predictors of Depression and Anxiety Among Patients with Chronic Skin Disorders in Dermatology Clinic	2018-2022	Geran Putra GP-IPM (60, 000) 1 publication
Attachment Dimensions, Rumination and Psychological Distress of College Students	2019-2022	Geran Putra GP-IPM (RM 40, 000
A Study of Parenting Styles, Screen Time, Sleep Time, and Physical Activity with Executive Function Among 5-6 Years Old Preschool Children in Hulu Langat, Selangor.	2022-2024	Geran Putra GP-IPM (RM 20, 000)
Effectiveness of a"mHealth App" on Pelvic Floor Muscle Exercise in Improving Compliance and Continence Status Amongst Pregnant Women	2018-2022	Geran Putra Berkumpulan (RM 150, 000) 8 publications, 1 under review
Quality of Life and Predictors Among Students in Malaysia: A Comparative Study with Iran	2015-2022	Matching Grant (University of Tehran (RM 95, 082) 1 publication, 1 under review
Establishing a Digital-Assisted Parenting intervention in Promoting Children Mental Health	2020-2022	(RM 91, 000) 1 submitted article 2 students
Development and Feasibility of Ehaematological Oncology Parent Education (EHOPE), an eHEALTH System for Infornational Support among Parents of Children with Haematological Cancer	2022-2024	MOSTI Technology Development Fund (RM 162, 723)

Research Project (Private Grant)	Source of research fund/Achievement
Vrelax-Stress Therapy Virtual Reality System	UNITEN R&D Sdn. Bhd. RM 25, 000
A Randomized, Open-label, Rater-blinded, Active Controlled, International, Multicenter Study to Evaluate the Efficacy, Safety and Tolerabilily of Flexibly Dosed Esketamine Nasal Spray Compared with Quetiapine Extended-Release in Adult and Eldery Participant with Treatment-Resistant Major Depressive Disorder Who A Continuing a Selective Serotonin Reuptake Inhibitor/Serotonin-Norepinephrine Reuptake Inhibitor	Johnson & Johnson Sdn. Bhd. RM 124, 687 Are
Open-label Long-term Extension Study for Participants with Treatment Resistant MDD Who Are Continuing Esketamine Nasal Spray Treatment From Study 54135419TRD3013	Johnson & Johnson Sdn. Bhd. RM 200, 000
Youth Exodus: Forced Migration of Youth from Southern Thailand to Malaysia	The Sasakawa Peace Foundation RM 243, 678
The Role of Attachment Styles, Mentalizing, and Emotion Regulation on Perceptions of Academic Stress amo Malaysian Medical Students and Psychiatric Trainees during the COVID-19 Pandemic	ng Royal College of Psychiatrists, United Kingdom (Medical Psychotherapy Faculty Small Project Grant) RM 2, 213.73
Research for Youths: Developing a Measure of Youth Well-Being in Malaysian Adolescents'	lman Research RM 50, 000
Evaluating a Violent Extremism Prevention Training Workshop for Teachers	lman Research RM 50, 000

REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

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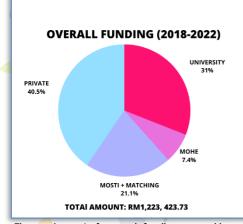


Figure 1 Amount of research funding secured in 2018 - 2020

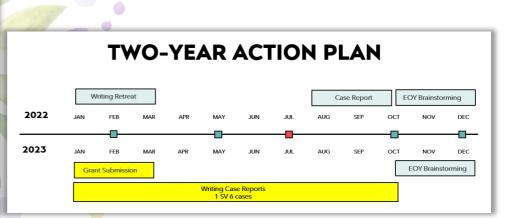


Figure 2 Action plan and strategies to improve research culture.

Current Research Projects (Private Grant):

Research Project (Private Grant)	Source of research fund/Achievement
Vrelax-Stress Therapy Virtual Reality System	UNITEN R&D Sdn. Bhd. RM 25, 000
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Evaluating a Violent Extremism Prevention Training Workshop for Teachers	Iman Research RM 50, 000

PROMOTING POSITIVE PERCEPTIONS AND MOTIVATION FOR FACING CHALLENGES, IMPROVING CLINICAL RESEARCH, and CULTIVATING RESEARCH & NETWORKING.

In doing the research, the department faced challenges in many ways like all researchers in the field. The top 3 mentioned challenges were (i) Limited number of public and private grant; (ii) to keep unwavering writing momentum and (iii) most of the lecturers are newbies in the research field. The other 2 challenges were the higher publication cost and time spent on the research was low.

To overcome the challenges issues, they had shared a few steps and actions undertaken to improve such as:

- Encouraging lecturers to apply more public and private grant while for young lecturers, they can apply form university's grant from RMC.
- 2. Held research meetings with colleagues to write up clinical cases.

Strategies to improve research cultures:

- 1. The members had writing retreats as such manuscripts from Manuscripts from Masters Students' Dissertation.
- 2. Subscribed to BMJ Case Reports for any suitable clinical case report.
- 3. Had E-O-Y Brainstorming for preparing next year grant application and publications.

We would like to thank Assoc. Prof. Dr. Sethu Thakachy Subha and Dr. Ruziana Masiran for the sharing. We hope that the sharing can transform tacit knowledge into explicit, written, and easily communicated knowledge for the right people to receive the right information at the right time. See you the next time!

Check out more information about our CRU Associate Members (CRAMs) for the Year 2022/2023 Member on HPUPM website at CRAMs Members



Be featured in our next series of RECRUS Newsletter by contacting us at CRU!



APPRAISALS IN META-JOURNAL HOUR 9

By: Nurfaizah, Aazifah Ilham and BH Chew



The paper:

PROSPECTIVE, MULTICENTER, CONTROLLED TRIAL OF MOBILE STROKE UNITS

https://pubmed.ncbi.nlm.nih.gov/34496173/

Why was this study conducted?

A potential way to reduce the time from stroke onset to treatment is with mobile stroke units (MSUs), which are ambulances equipped with a CT scanner, point-of-care laboratory testing, and personnel trained (paramedics, CT technologist and critical care nurse) to diagnose and treat patients with stroke in the ambulance, including administration of tissue plasminogen activator (t-PA) and triage for endovascular thrombectomy (EVT). Outcomes with t-PA and EVT are best with treatment as soon as possible especially within the first hour after the stroke onset. MSUs have the potential to increase the frequency and speed of the delivery of t-PA treatment, but whether and how much t-PA treatment in an MSU alters outcomes has not been extensively studied. Thus, this study aimed to compare clinical outcomes in patients eligible for t-PA who received care from MSU as compared with standard care by emergency medical services (EMS).



How was it done?

Trial design and interventions

The study was a prospective, multicenter, alternating-week, cluster-controlled trial that compared outcomes in t-PA eligible patients with acute stroke who received MSU or standard emergency medical services (EMS) care. Patients who met the screening criteria for t-PA treatment on MSU or EMS arrival at the scene were considered for enrollment (regardless of the eligibility for

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primary outcome analysis). All sites collaborated with local EMS to treat patients according to the trial protocol. Enrollment of patients into the two trial groups was based on the prospective designation of alternating MSU or EMS weeks. As blinded enrollment of individual patients was not possible, several measures were taken to reduce the potential for ascertainment bias including enrollment of patients on both MSU and EMS weeks on the basis of assessment of the same clinical and laboratory criteria carried out on arrival of the MSU or EMS on the scene, later adjudication of eligibility for t-PA by a vascular neurologist who was unaware of the trial group assignments and treatment, and blinded assessment of 90-day outcomes by a trained site investigator. Patients with potential stroke within 4.5 hours after the onset of symptoms were identified by a 911 dispatch center. The MSU and EMS teams were both alerted on MSU and EMS weeks. The patient's history, blood glucose level, neurologic and general physical condition, and NIHSS score were obtained from the patients. All the enrolled patients were followed up for 12 months.

Power and sample size calculations

There were several changes made to the original trial protocol including sample size estimation. The number of t-PA eligible patients to be enrolled was increased from 541 to 1038 based on newly available data from the previous study. This sample size re-estimation was blinded to study outcomes and considered the numerical imbalance between the MSU and EMS groups observed during the run-in phase and first part of the trial. The sample size was calculated using a two-sample t-test. By assuming numerical imbalance in MSU as compared to EMS enrollment (1.8) in the previous trial, a potential loss to follow up of 5%, pooled standard deviation for the primary outcome (0.385), and at least 80% power to detect a between-group difference of 0.07 points in the score on the utility-weighted modified Rankin Scale, a total of 1038 patients were required for analysis.

Outcomes

PRIMARY OUTCOME	SECONDARY OUTCOMES	SAFETY OUTCOMES
The score on the utility-weighted modified Rankin scale (uw-mRS) at 90 days in patients who were adjudicated to be eligible to receive t-PA based on subsequent blinded review. The score on the utility-weighted modified Rankin scale (uw-mRS) is range from 0 to 1 (higher scores indicate a better outcome). A score on the utility-weighted modified Rankin scale (uw-mRS) of at least 0.91 is approximately equivalent to a score on the modified Rankin scale (mRS) of 0 or 1, denoting no or minimal disability. All modified Rankin scale (mRS) assessments at 90 days involved the use of a standardized questionnaire (Rankin Focused Assessment) and were obtained by a trained investigator at each site who was unaware of the trial-group assignments.	 Changes across the modified Rankin scale (mRS) for all patients who received t-PA. A 30% reduction (improvement) from baseline to 24 hours in the NIHSS score. Time metrics related to treatment times from stroke onset. The percentage of eligible patients treated with t-PA and EVT. 	 Symptomatic intracerebral hemorrhage. Death. The number of patients with symptoms that mimic stroke (stroke mimics) who were treated with t-PA in each trial group based on final diagnosis after hospital evaluation.

Statistical Analysis

The primary analysis was of the score on the utility-weighted modified Rankin scale (uw-mRS) in the subgroup of patients adjudicated to be eligible for t-PA, whether or not they received t-PA. Because the assumptions of the linear regression model and proportional-odds assumptions were not met, the prespecified statistical plan was defaulted to use a prespecified binary logistic regression for dichotomized scores on the uw-mRS of at least 0.91 or less than 0.91 (equivalent to a score on the mRS of ≤ 1 or >1). Logistic

regression was used for the secondary outcome of a 30% reduction in the NIHSS score. Because trial-group assignments to MSU or EMS were not truly randomized, in a post hoc analysis, propensity scores were used to estimate the MSU group effect on all outcomes regarding scores on the uw-mRS, the mRS, and the NIHSS. Subgroup analyses were conducted as in the primary models. However, the trial was not powered to analyze these subgroups, and no definite conclusions can be drawn from these data. The interim analysis of the dichotomized scores on the utility-weighted modified Rankin scale at 90 days was conducted by means of a two-sample, two-sided test of proportions with the use of a Haybittle—Peto boundary (alpha spent, 0.001).

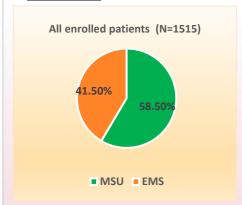
MOBILE STROKE UNIT

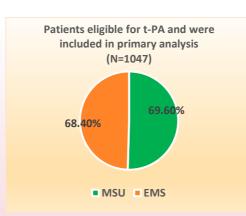
What was the finding?

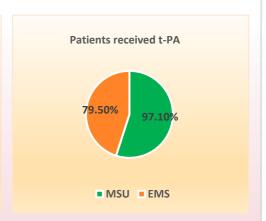
Patients Enrolled

Of the 1515 enrolled patients, a total of 1047 patients [MSU: N= 617 (69.6%); EMS: N= 430 (68.4%)] were adjudicated to be eligible for t-PA and included in the primary analysis. Of the patients who were eligible to receive t-PA, 97.1% who were assigned to MSU received t-PA, compared with 79.5% in the EMS group. About 14% (N=218) of all the patients enrolled were not eligible for t-PA because intracranial blood was detected on CT. Baseline characteristics were similar in the MSU and EMS groups for the patients eligible for t-PA, including stroke severity.

Outcomes







Primary Outcome

Secondary Outcomes

OUTCOME	MSU	EMS
The mean score on the uw-mRS at 90 days in patients eligible for t-PA.	0.72 ± 0.35	0.66 ± 0.36
The mean score on the uw-mRS at discharge for all enrolled (N=1515) patients.	0.57 ± 0.37	0.51 ± 0.36
The percentage of patients who were eligible for t-PA who had a score on the mRS of 0 or 1 at 90 days.	55%	44.4%

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Patients who received MSU care were more likely than those who received EMS care to have a utility weighted disability score of ≥0.91.

OUTCOME	MSU	EMS
30% reduction in the NIHSS score from baseline to 24 hours occurred in patients eligible for t-PA.	75%	67.8%
Improvement to an NIHSS score of 0 by arrival at the emergency department.	5.5%	3.3%
The median time from stroke onset to t-PA treatment.	72 minutes	108 minutes
Percentage of patients were treated within 60 minutes after onset.	32.9%	2.6%
The median time from alerting of emergency services to EVT start.	141 minutes	132 minutes
The percentage of patients ultimately treated with EVT.	23.7%	27.0%
Safety outcomes	MSU	EMS
Symptomatic intracerebral hemorrhages among patients who received t-PA.	Approximately 2.0%	
Mortality at 90 days.	8.9%	11.9%

How much can we take out from this research/ paper?

A very well done study despite the many and real challenges as faced by clinical research such as disproportional sample size achieved from the 8 different sites with Houston contributed about 80%, different level of emergency response and services at different sites, MSU experienced a down service during the study period, maintaining blinding throughout and for all outcomes were an almost impossible task in a real-world clinical research, and encountering non-normal but not unexpected data distribution that complicated the statistical analysis. On top of all these was the choice of a cohort and controlled instead of a randomised controlled study design. This has undoubtedly made the study to have another challenge of between-group comparison to determine the effect of MSU versus EMS. Despite all these challenges, it was a well-planned and conducted study with good power, comparability between the 2 groups was achieved, blinding on primary outcome evaluation was done, adjudication was imposed on study decisions where needed, statistical analyses were properly and meticulously done supplemented with sensitivity analysis that confirm ITT and as treated analysis showed consistent with expected lower effect sizes in the former.

There is a growing interest in using utility weight as a measurement of disease burdens and cost-effective analysis of disease and treatment. Uw-MRS has been proposed to be used as a primary outcome for stroke trials. However, no consensus on the best way to apply the utility weight which hinders many people, and standardization is difficult to do. Uw- MRS combines the value from clinician through MRS score and utility base via EQ-5D-3L from patient and derives a score through regression analysis (linear or logistic). So far, there is no publication for Uw-MRS for the Malaysian population, however, we already developed the utility value for EQ-5D-3L in 2019 ².

To bear in mind the mainly US urban setting, healthcare system and likely to be locally and culturally related UW-mRS measure in this study, then the results could be safely interpreted and generalised. Indeed, the results showed that MSU performed significantly better (remember the clinically significant different of the UW-mRS was 0.03) across all investigated outcomes with some expected and now quantified effects such as the percentage of patients who were treated with t-PA within 60 minutes after onset was almost 33% in MSU compared to 3% in EMS!

Naturally, the obvious questions followed from this study are why not MSU service be studied in other setting, and be established? True enough, many studies have also been replicated in other countries and MSU is available elsewhere beside US^{3,4}. There are systematic reviews and meta-analyses, one of the recent one shows that MSU is indeed better than EMS⁵. Remaining questions are the same that face the health system and services when a change is required. These conceived challenges can be overcome one-by-one with high-quality research that involved public and community assessment and involvement, healthcare professionals training and availability, political will and government support.

References

- 1. Grotta JC, Yamal JM, Parker SA, Rajan SS et al. Prospective, Multicenter, Controlled Trial of Mobile Stroke Units. N Engl J Med. 2021;385:971-81.doi: 10.1056/NEJMoa2103879.
- 2. Shafie AA, Thakumar AV, Lim CJ et al. EQ-5D-5L Valuation for the Malaysian Population. PharmacoEconomics. 2019; 37:715–725. doi 10.1007/s40273-018-0758-7.
- 3. Ebinger M, Siegerink B, Kunz A, et al. Berlin_PRehospital Or Usual Delivery in stroke care (B_PROUD) study group. Association Between Dispatch of Mobile Stroke Units and Functional Outcomes Among Patients With Acute Ischemic Stroke in Berlin. JAMA. 2021 Feb 2;325(5):454-466. doi: 10.1001/jama.2020.26345.
- 4. Zhao H, Coote S, Easton D, et al. Melbourne Mobile Stroke Unit and Reperfusion Therapy: Greater Clinical Impact of Thrombectomy Than Thrombolysis. Stroke. 2020 Mar;51(3):922-930. doi: 10.1161/STROKEAHA.119.027843.
- 5. Fatima N, Saqqur M, Hussain MS, Shuaib A. Mobile stroke unit versus standard medical care in the management of patients with acute stroke: A systematic review and meta-analysis. Int J Stroke. 2020 Aug;15(6):595-608. doi: 10.1177/1747493020929964.

MOBILE STROKE UNIT



By: Dr. Sam Yew Sheng Qian, Medical Officer, CRU

Watch the recorded video on our Youtube channel

What is Digital Health?

Digital health is defined as the use of information and communications technologies in medicine and health to manage illnesses and to promote wellness.

Digital health is gaining more attention due to the unmet need of healthcare as a result of:

- Ageing population
- Rising costs of healthcare
- Worsening of income disparity
- Increased child morbidity & mortality
- Emerging of new epidemics & pandemics
- Racial discrimination on access to healthcare

Different authorities (or countries) have different methodologies in classifying digital health technologies, as demonstrated by:

- WHO Digital Health Intervention Classification
- United States Food and Drug Administration (FDA) Classification
- French National Authority for Health Classification
- National Institute of Health and Care Excellence (NICE) Classification

Unfortunately, none of the above taxonomy provides a clear and comprehensive classification due emerging to and digital multifunction nature of health technologies. As such, we propose a new classification of digital health technologies, which comprise of the nine domains as follows:

- Health Information Technology
- Mobile Medical Applications
- Wireless Medical Device
- Telemedicine
- Artificial Intelligence
- Software as a Medical Device
- Medical Device Data Systems
- Virtual Reality
- Augmented Reality

Below are the nine domains of digital health technologies with their respective benefits and challenges during implementation:

Health Information Technology

Defined as hardware, software, integrated technologies or intellectual property that are designed to support health care entities or patients for the creation, maintenance, access, or exchange of health information.

Health IT includes:

- ✓ Electronic medical record (EMR)
- ✓ Electronic health record (EHR)
- ✓ Health information exchange (HIE)
- ✓ Health databases (e.g., MyHix, MyHDW)



Benefits of Health IT:

- ✓ Providing accurate, up-to-date, complete, and easy-access information about patients at the point of care.
- ✓ Securely sharing electronic information with patients and other clinicians.
- ✓ Enabling safer and more reliable prescribing (reduce medication error).
- ✓ Helping providers improve productivity and efficiency.
- ✓ Reduce costs through decreased paperwork and reduced duplication of testing.

Challenges during implementation:

- ✓ High cost of implementation: hardware, software set-up costs, implementation assistance, staff training, ongoing network fees, and maintenance.
- ✓ Staff resistance: Medical staff may show reluctance to adapt to the technology due to lack of awareness or an inconvenient interface and functions.
- ✓ Time-consuming (training): Prior to deploying the system, the staff needs to be given thorough training about the new workflow. Thus, physicians have to spend extra time and effort to understand the new system.
- ✓ Data privacy: concerns of the patient community as well as the provider.
- ✓ Data migration: It is a logistical nightmare for the staff to export or transform paper-based documents into the digital records.
- ✓ Limitation of technical resources: This is often faced by small clinical establishments and private health practitioners who rarely own an in-house technical team and hardware to equip the health IT solution.

Mobile Medical Applications (mHealth)

Mobile medical app (or mHealth) is a term used for the practice of medicine and health using mobile devices.

mHealth applications use mobile devices in collecting community and clinical data, delivery/sharing of healthcare information for practitioners, researchers and patients, real-time monitoring of patient vital signs, as well as training and collaboration of health workers.

Benefits of mHealth:

- ✓ Improve on clinical outcomes by allowing continuous health monitoring: Most of the fitness apps (e.g., MyFitnessPal, Apple Health) come with the capability to monitor heart rate and blood pressure. These realtime health information allow doctors to track the progress of diseases and the effects of the treatment on the patient.
- ✓ Improved patient health: Apps are available to help patients being complaint to medications as per the doctor's prescription by alerting people about taking drugs at the right time and right dosage (e.g., Medisafe Pill Minder). Some apps enable users to track sleep and reminder for daily calorie intake.
- ✓ Healthcare cost reduction by enabling remote treatment: Consultation, dietary suggestions, and exercise regimens can be conducted and report can be produced right through the mobile apps. This saves all the trouble, time, and costs for any visit to medical facilities.
- ✓ Effective prevention, disease surveillance and quick response to disease outbreaks: mHealth helps to trace and control the spread of communicable diseases (e.g., MySejahtera).
- ✓ Improvement of public awareness: mHealth promote awareness among the community (e.g., organ donation, early detection of cancer, vaccination program).

Challenges during implementation:

- ✓ Data security and privacy: mHealth has not shown strong evidence of patient data confidentially which is a grievous militant against success because data capture, storage and retrieval are not securely handled.
- ✓ Network access: Network coverage is not evenly distributed with very bad signal in some rural areas, meaning mHealth cannot be operational in such places.
- ✓ IT Illiteracy: Lack of education (lack of understanding and confusion) for technology and its adoption which leads to low uptake.
- ✓ Policy and regulation: There is currently no specific legislative or regulatory framework in Malaysia that defines the terms "digital health". In Malaysia, digital healthcare products or medical devices are primarily governed by the Malaysian Medical Device Act, 2012.

Wireless Medical Device

Wireless medical devices, or wearable technology are smart electronic devices that are worn close to and/or on the surface of the skin.

They detect, analyze, and transmit information concerning body signals (e.g., vital signs) and/or ambient data and which allow immediate biofeedback.

They come in many forms, including smartwatches, head mounted displays, smart jewelry, smart clothing, epidermal electronics.

Benefits of wireless medical device:

- Closer monitoring to patients' condition: Wearable technologies are used to gather health data from patients remotely. Hence, doctors no longer need to have their patients come into the clinic to collect the necessary data. This data lead to better treatment plans and patient monitoring.
- ✓ Easy to use: Wearable technology is handy, smart, comfortable to wear, easy to setup, and user friendly.
- ✓ Valuable for elderly: Smartwatches have medical alert systems with built in fall and heart attack detection that automatically contacts the emergency services. They also come with features to provide reminders for important times such as when to take medication.
- Encourages fitness: Using wearables to track fitness goals can encourage the community to exercise more and promote healthy living.

• Challenges during implementation:

- ✓ Skills and knowledge required: Although wearables can perform ECG, the result may be unsatisfactory if the device is not applied carefully. Even if patient capture ECG successfully, the results would still need to be interpreted by a physician.
- ✓ Data security concerns: Wearables collect personal and confidential data which may be misused by the app developers.
- Capabilities are limited: Although the functionalities of wearables have been expanded, it is worth noting that many functions of the wearables are still dependent on smartphones to be able to work.
- ✓ Expensive: Current available wearables can be relatively expensive and some apps need to be purchased. As a result, the communities from lower socioeconomic status are unable to enjoy all the benefits.

Telemedicine

Telemedicine is the practice of medicine using technology to deliver care at a distance.

• Benefits of telemedicine:

- Improved access to healthcare: Telemedicine provides healthcare services for patients with a lack of transport, lack of mobility, lack of funding, quarantined due to disease outbreaks, or from rural area.
- ✓ Higher patient engagement rates: Online consultation, appointment booking, and reminders help patients to be more engaged in their care. This also reduces the risk of exposure and anxiety during office visits.
- ✓ Better patient outcomes: Closer monitoring for diabetes, high blood pressure, heart disease, musculoskeletal problem and behavioral health produces better health outcomes.
- ✓ Reduce hospital burden: Telemedicine may help solve increasing shortages of healthcare professionals and to reduce hospital visits.
- Cost-cutting for patient and healthcare facilities: Telemedicine enable more efficient care at lower cost (reduce the time and distance required for treatment).

Challenges during implementation:

- ✓ Lack of acceptance among healthcare providers: lack of desire or unwillingness among some physicians to adapt clinical paradigms for telemedicine applications.
- Reimbursement: Medicaid and Medicare did not reimburse the use of telemedicine at the same level as traditional on-site visits.
- ✓ Security measures: Early in the pandemic, it became clear that Zoom, for example, was not robust enough to abide by HIPAA security standards.
- ✓ Lack of awareness: If patients are unaware of the telemedicine option, they may never request it.
- ✓ Lack of IT literacy: Patients may not have the technology required to make effective use of telemedicine. The ageing community may have trouble using technology.

Artificial Intelligence (AI)

Artificial intelligence (AI) is the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.

It exhibits traits associated with a human mind such as learning and problem-solving.

- There are 6 major branches of AI:
 - ✓ Machine learning (ML) supervised ML, unsupervised ML, semi-supervise ML, reinforcement ML
 - ✓ Neural network (Deep Learning)



- √ Natural Language Processing (NLP)
- √ Fuzzy logic
- ✓ Expert systems
- ✓ Robotics

• Benefits of AI:

- ✓ Better data-driven decisions.
- ✓ Increased disease diagnosis efficiency.
- ✓ Reduced time required for treatment.
- Create time-saving administrative duties of healthcare professionals.
- ✓ Integration of information.
- ✓ Reduced unnecessary hospital or clinic visits.
- ✓ Better patient care at reduced costs.

Challenges during implementation:

- ✓ Reluctance among medical professionals to adopt AI.
- ✓ Integration of data is complex, which can result in missing and disparate data.
- ✓ Challenges such as trust issues among patients.
- ✓ Talent shortage (specific skills and knowledge needed to succeed with AI).
- ✓ Fear of job replacement and increased unemployment (i.e., concern that computers will replace physicians and staff).
- ✓ Less human interaction and affectionate care.
- ✓ Concern regarding data privacy (data usage could be interpreted as an
- ✓ infringement of a patient's right to privacy).
- ✓ Difficulty in learning a new technology in the workplace.
- ✓ High initial capital requirement (high development costs).
- ✓ Lack of curated healthcare data (lack of database for "learning").

Software as a Medical Device (SaMD)

Software as a Medical Device (SaMD) is a standalone, independent software intended to be used for medical purposes that function without being part of a hardware medical device.

Nonetheless, it may require non-medical devices like tablets, smartphones, smartwatches, or computers in order to run correctly.

Benefits of SaMD:

- ✓ Improved health outcomes: SaMD amplifies the effectiveness of existing treatment by enabling easy and fast collection of high-quality data, which leads to better health outcomes.
- ✓ Cost-effective: SaMD enhances and builds on existing medical device functionality through software solutions that are faster, and often cheaper to updatethan hardware.



• Challenges during implementation:

- ✓ Difficult to integrate and adapt: Difficult to integrate and adapt: SaMD is hard to adapt to ever evolving technology.
- ✓ Security of the software: Cyber attacker to remotely take control of the device, change its functionality and affect the safety or effectiveness of the device, or leak confidential information.

Medical Device Data Systems (MDDS)

Medical Device Data Systems (MDDS) are hardware or software intended to transfer, store, convert formats, and display medical device data. It does not modify the data or modify the display of the data, and it does not by itself control the functions of other medical device.

It generally run-on computers or server platforms for the purpose of making their stored data more widely available.

Benefits of MDDS:

- ✓ Versatility (supports a long list of medical devices).
- ✓ Reduce data entry errors (send data directly to EMR).
- ✓ Improve productivity and save time (healthcare providers can spend time providing care, instead of performing manual data entry).

Challenges during implementation:

- ✓ High cost (the cost of developing and maintaining a MDDS is a major concern. In addition, the need of an extensive expertise make MDDS development a great expense).
- ✓ Data privacy (connected devices are vulnerable to deliberate attacks as well as undirected malware).

Virtual Reality (VR)

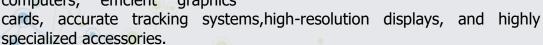
Virtual reality (VR) uses head-mounted display, smart glasses, and/or haptic gloves to generate realistic images, sounds and other sensations that simulate a user's physical presence in a virtual environment, enabling a person to interact with virtual environment.

Benefits of VR:

- ✓ Can be used remotely (training for medical staff can be done off-site).
- ✓ Easy to use.
- ✓ Can be used to collect data (e.g., measuring movements of rehabilitating patients or the accuracy of motor skills of surgeons in training).
- ✓ Can be used for training (optimally train medical staff on surgical skills so that fewer mistakes to be made on real patients).

Challenges during implementation:

- ✓ Reduced face-to-face communications: The use of VR to perform rehabilitation exercises at home without direct supervision of the healthcare provider could have undesirable outcomes.
- ✓ Cost: Establishing and developing VR programs requires highquality hardware, high-speed computers, efficient graphics



- Reluctance: People who are unfamiliar with IT may also resist the use of new technologies.
- ✓ Side effects: Cybersickness, perceptuomotor aftereffects, headaches, eye strain, and addiction have been reported as the potential side effects after prolonged exposure to VR.



Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information.

AR alters one's ongoing perception of a real-world



environment, whereas VR completely replaces the user's real-world environment with a simulated one.

Benefits of AR:

- ✓ Enhance the learning experience in medical training.
- ✓ Increase accuracy and efficiency for surgery and medical procedures (e.g., venepuncture and ultrasound guided needle placement).

• Challenges during implementation:

✓ Same as VR.



If you are interested to be part of our digital health research initiative, we welcome you to join our upcoming events as follows:

Dates	Topics	Speakers
4 th August 2022	Applications of AI and ML in	Faculty of Computer
	healthcare and their challenges (a	Science and Information
	tea session with discussion)	Technology, Universiti
		Putra Malaysia
October 2022	Applications of telemedicine and its challenges	To be confirmed
December 2022	Applications of mHealth and EMR and their challenges	To be confirmed
February 2023	Applications of wearable technology in healthcare and its challenges	To be confirmed
April 2023	How to deal with big data in healthcare (with hands-on)	To be confirmed
June 2023	Data mining in healthcare databases (with hands-on)	To be confirmed
August 2023	Mobile apps development (with hands-on)	To be confirmed

Research Colloquium Series 3:

A Multicenter Study of the Relationship between Anthropometric Measurement and Hamstring Autograft Diameter in Anterior Cruciate Ligament Reconstruction in Malaysia



By: Dr. Wong Vei Seng

Background

Anterior cruciate ligament (ACL) reconstruction is a common procedure to restore knee stability and the ability to estimate the hamstring graft diameter preoperatively can prevent reconstruction failure. This study aimed to establish the relationship between anthropometric measurements with the hamstring graft diameter in ACL reconstruction surgery for the Malaysian population .

Methods

This is a retrospective cross-sectional study of patients treated with four strands hamstring autograft (gracilis and semitendinosus) in a primary single bundle ACL reconstruction surgery at two tertiary hospitals in Malaysia from 2014 – 2020. Patients' demographic, anthropometric measurements and hamstring graft diameter were retrieved and analysed statistically.

Results

70 patients were included. The mean body weight was 71.29±14.14kg and the mean height was 1.68±0.08m. The mean body mass index (BMI) was 25.38 ± 4.65 kg/m² and the mean hamstring grafts diameter was 7.94±0.69mm. There was a statistically significant and positive correlation between weight and height to hamstring's graft diameter (p<0.05). Linear regression has shown that weight was the sole predictive factor for hamstring graft's diameter (p<0.05, r²= 0.119).

Conclusion

Our study supports the evidence of weight as a predictive factor for hamstring's graft diameter in the Malaysian population. The graft's diameter can be predicted preoperatively by calculating the patient's body weight value using the proposed predictive formula in this study. In contrast, height and BMI did not predict hamstring graft size in the Malaysian population.

ANNOUNCEMENTS

- 1. MJH series 11: Out-of-pocket payments for complementary medicine following cancer and the effect on financial outcomes in middle-income countries in southeast Asia. 22nd July 2022 by Ms. Iman Hafizah
- 2. Wanted and ready to do a Cochrane Systematic Review? 12th August 2022 by Prof. Dr Jackie Ho & Dr Prashanti Eachempati
- 3. Common Advanced Statistics in Medical & Health Science and Statistical Tests Assumptions. 28th July 2022
- 4. Artificial Intelligence in Healthcare: A Discussion with Experts
- 5. Research Colloquium Series 4
- 6. Research Development Workshop, 25 26 August 2022
- 7. The 6th International Clinical Trials Methodology Conference 2022. October 3 6, 2022. https://ictmc.org/
- 8. 9th International Congress on Peer Review and Scientific Publication. September 8 10, 2022 Chicago, IL. https://peerreviewcongress.org.
- 9. The 9th Asia Pacific Primary Care Research Conference, 1 3
 December 2022
- Quantitative Methodology Workshop for Health Research by The Research Office (RO) and Universiti Malaya Primary Care Research Group (UMCPRG), Faculty of Medicine (UM)







CLINICAL RESEARCH UNIT PRESENTS

JOURNAL HOUR META

Is cancer diagnoses prospectively associated with more expenditures of complementary medicine? **FULL ARTICLE**

Out-of-pocket payments for complementary medicine following cancer and the effect on financial outcomes in middle-income countries in southeast Asia: a prospective cohort study Click to access full article:

https://www.thelancet.com/action/showPdf?pii=S2214-109X%2821%2900595-7

22nd JULY 2022 (FRIDAY) | 10.30 - 11.45AM | WEBEX





Open to all UPM/ HPUPM staff, students and public CPD points (UPM & MMA) and e-certificate will be awarded upon successful participation

For any inquiries, please contact: 03-97699759 or email: cru_hpupm@upm.edu.my







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First Announcement





Clinical Research Unit, HPUPM presents

Webinar on

August 12th, 2022 9.00 am - 1.00 pm

COCHRANE REVIEW

Preparation

Cochrane reviews are systematic reviews carried out by an international network of researchers across 130 countries. The main aim of the Cochrane reviews is to help healthcare providers, policy makers, patients, their advocates, and carers make well-informed decisions about healthcare. Cochrane reviews have also been recognized internationally as the highest standard in evidence-based healthcare.



Speaker 1

PROF. JACQUELINE **IUDITH HO**

Co-Director of Cochrane **M**alaysia RCSI & UCD Malaysia Campus

Whether you are a clinician, researcher, academician, or postgraduate student,

we cordially invite you to join this webinar!



Speaker 2 PROF. DR. PRASHANTI **EACHEMPATI** Dental Faculty, Manipal University College Malaysia



http://shorturl.at/SYZ07

For any inquiries, please contact: Dr. Yew Sheng Qian | 03-9769 9761 | shengqian@upm.edu.my Ms. Faridzatul Syuhada Abdul Rashid | 03-9769 9763 | faridzatul@upm.edu.my



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Tentative Program

Time	Topic	Speaker
0850-0900	Introductory speech	СВН
0900-0930	 A brief introduction of Cochrane review What are systematic reviews and how do they differ from narrative reviews? What are the steps in a Cochrane review? Why Cochrane reviews? 	JJH
0930-1000	 How to become a Cochrane review author Guide to complete a Cochrane review proposal 	PE & JJH
1000-1030	Break	
1030-1130	 The process of developing Cochrane review titles and assessing their suitability Discussion of potential Cochrane review title (to be submitted prior to workshop) 	JJH
1130-1200	Theoretical issues or challenges in conducting a Cochrane review	PE
1200-1230	Training offered by Cochrane Malaysia	PE
1230-1300	Q&A Session	PE & JJH

JJH: Prof. Jacqueline Judith Ho PE Prof. Dr. Prashanti Eachempati CBH: Assoc. Prof. Dr. Chew Boon How

> Note: The Organiser reserves the right to cancel or change the topic or trainer of the program, if for whatever reasons beyond its control.











INOVASI





First Announcement

Clinical Research Unit, HPUPM presents





an or click on the QR code

MULTIVARIABLE

STATISTICS & STATISTICAL

TEST ASSUMPTIONS







8.15 am – 5.00 pm



Registration **Fees**

RM50

FOR UPM STAFF / STUDENT & FOR NON-UPM STUDENT

RM100

FOR NON-UPM STAFF

Method: Bank Transfer (EFT / CDM) Beneficiary Name: Hospital Pengajar UPM Bank Name: Bank Islam Malaysia Berhad

Account Number: 14014010156683

Payment Reference: 'MultiStats2022'



ASSOC. PROF. DR. KARUTHAN A/L CHINNA

BSc. (Education), MSc. (Applied Stats), PhD (Management)

UCSI University

For any inquiries, please contact: Dr. Nur Aazifah Ilham | 03-9769 9761 | aazifah@upm.edu.my Ms. Faridzatul Syuhada Abdul Rashid | 03-9769 9763 | faridzatul@upm.edu.my





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Tentative Program

Time	Title	Speaker	
MULTIVARIABLE STATISTICS			
0815-0830	Introductory speech	СВН	
0830-0900	General Linear Model (GLM)		
0900-0930	Generalized Estimating Equation (GEE)	KC	
0930-1000	Mixed model (MM)/Generalized Linear Mixed Model (GLMM)	NO NO	
1000-1030	Structural Equation Modeling (SEM)		
1030-1100	Rest / Q&A		
1100-1230	Interactive session with working examples from analysis with GLM, GEE, MM, GLMM and SEM	КС	
	CHECKING STATISTICAL ASSUMPTIONS		
1230-1300	Introduction of statistical test assumption: What it is and why need to be checked?	NAI	
1300-1400	Lunch		
	How to assess for statistical assumptions?		
What	are the corrective measures if the statistical assumption not fulf	illed?	
1400-1445	Parametric Tests: T-test, Pearson Correlation Non-parametric tests: Spearman Correlation, Chi-Square, Wilcoxon Rank sum Test, Mann-Whitney U Test		
1445-1530	Multivariable linear and logistic regressions, Poisson regression and Survival analysis statistical test assumptions		
1530-1615	Generalized linear model and Random/Mixed effect model statistical test assumptions		
464E 4700	Q&A	KC	
1615-1700	Summary	СВН	

KC: Assoc. Prof. Dr. Karuthan A/L Chinna CBH: Assoc. Prof. Dr. Chew Boon How

NAI: Dr. Nur Aazifah Ilham

Note: The Organiser reserves the right to cancel or change the topic or trainer of the program, if for whatever reasons beyond its control.





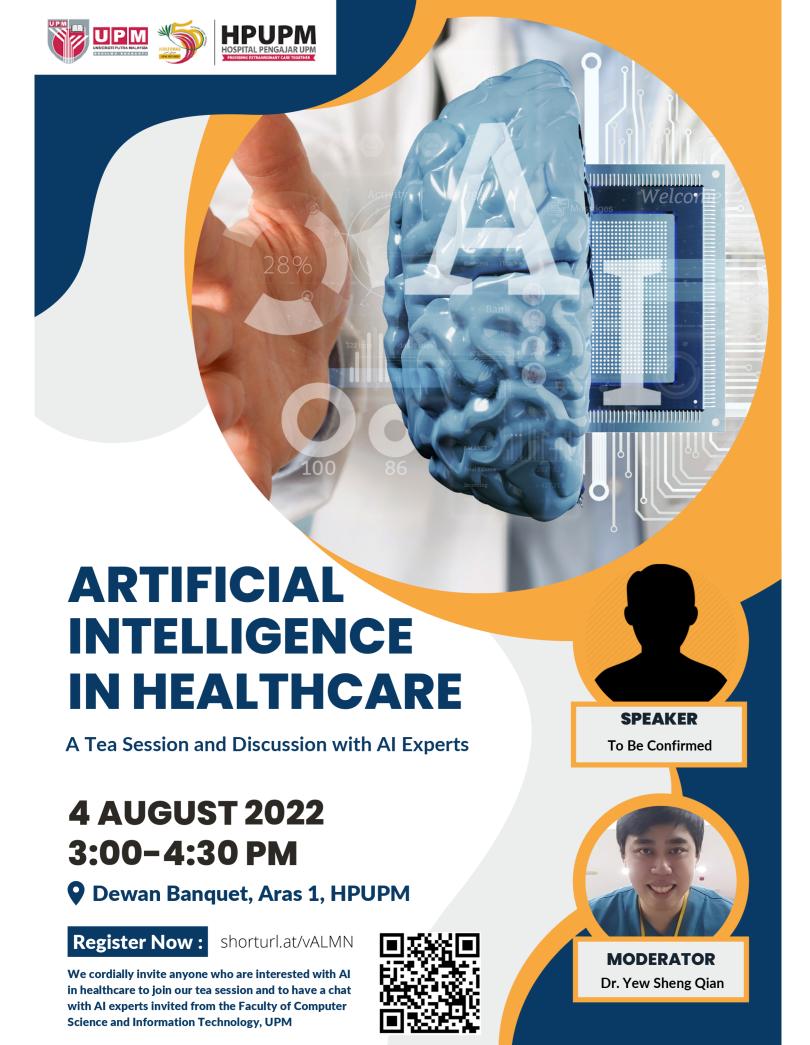








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ORGANISED BY: CLINICAL RESEARCH UNIT (CRU), HPUPM

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RESEARCH







Garian

24th AUGUST 2022 (WEDNESDAY)

2:15 PM - 3.45 PM

Presenter





"A Developmental Model of Patient Engagement across Multiracial Society in Malaysia

ASSOC, PROF. DR. ANEESA BINTI ABDUL RASHID Associate Professor / Specialist Department of Family Medicine





"Exploring the Critical Components in Doctor-Patient Communication, Qualitative study"

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CLINICAL RESEARCH UNIT (CRU), HPUPM PRESENTS

RESEARCH DEVELOPMENT **WORKSHOP**

A hybrid workshop to learn and conduct a proper and high-quality clinical, biomedical and health sciences research.

25 - 26 AUGUST 2022 | 8.00 AM - 4.30 PM

BOOK YOUR PREFERRED SLOT

1. GO-NOW Hands-on Physical Sessions Participants*

OR

LIMITED TO 10 SEATS

2. Attendees* (Physical / Online)

Categories of participants

GO-NOW Participants To attend with output*

Attendees Without output

*Output:

Research proposal/mini review/peer-review

GO-NOW Participants are required to submit 500 words essay to introduce and argue on a topic of own professional interest or areas to pursue; at least one month before workshop to CRU.

Venue: Hospital Pengajar UPM, Serdang

LIVE **>**



Category	Fees
HPUPM/ FPSK staff/ students	RM 200
Other UPM faculties	RM 300
Non-UPM (Malaysians)	RM 500
Non-Malaysians	USD 500

For pre-registration, scan QR code below

Or click [HERE]





***An email will sent registration and payment confirmation near to the workshop date.

For further information, please email: cru hpupm@upm.edu.my or contact: 03-9769 9763/ 9759/ 9761













TENTATIVE OF THE WORKSHOP

Hour	Talk/ Topic	Tentative speaker
DAY 1 (25 AUGUST 2022)		
0800 - 0815	REGISTRATION	
0815 - 0830	Introduction : Quality healthcare, research, KPI & career advancement	CBH & TDPA
0830 - 0845	Testimony I: Personal sharing by an outstanding researcher	Prof. Sherina
0845 - 0915	Interactive talk 1: Understanding the whole research process	CBH
0915 - 1015 1015 - 1030	Interactive talk 2: Fundamental concepts of clinical epidemiology Interactive talk 3: Classification of epidemiologic research	CBH CBH
1015 - 1030	BREAK	OBIT
1045 - 1115	Interactive talk 4: An introduction to qualitative study & designs	Dr. Irmi
1115 - 1145	Interactive talk 5: Research question, literature review & conceptual framework	СВН
1145 - 1215 1215 - 1245	Interactive talk 6: An introduction to databases & search strategies Interactive talk 7: Theoretical design	CBH & an invited speaker CBH
1245 - 1315	Interactive talk 8: Data collection design	CBH
12 10 1010	LUNCH	05.1
1400 - 1430	Interactive talk 9: Sample size estimation	СВН
1430 - 1500	Interactive talk 10: Statistical design	CBH
1500 - 1515	Interactive talk 11: Summary: clinical epidemiology & research methodology	СВН
1515 - 1545	Interactive talk 12: Writing up a study proposal	СВН
1545 - 1615	Interactive talk 13: Ethics clearance for a clinical study	Prof Johnson
1615 - 1645	Interactive talk 14: Funding opportunities	Ms. Nurfaizah
	DAY 2 (26 AUGUST 2022)	
0800 - 0815	REGISTRATION	
0815 - 0915	Interactive talk 15: Statistical analysis	СВН
0915 - 1000	Interactive talk 16: Comprehensive reporting, quality writing	Ms. Iman
1000 - 1030	Interactive talk 17: Publication process BREAK	Ms. Salwana
1045 - 1245	Interactive talk 18: Intellectual Property. UPM IP Putra Science Park and the Sistem PRiMS (Putra Research & Innovation Management	Dr. Zahira
	System)	5 _ 5 5
LUNCH		
1400 - 1500	Interactive talk 19: What is evidence-based practice? Appraise the evidence: primary research and systematic reviews & meta-analysis	СВН
1500 - 1530	Interactive talk 20: Summary: a suggested roadmap for clinicians to higher quality in research and publication	СВН
1530 - 1545	Testimony II: Personal sharing by an outstanding researcher	Prof Amin
1545 - 1630	Closure: Summary & What have you learned? Q&A	СВН
Break & dismissed		
	DAY 3 (AFTER 2-3 MONTHS POST-WORKSHOP) *For GO-NOW Participants only	Facilitator
0800 - 0830	REGISTRATION & Intro	^- ::
0830 - 1630	Study proposal presentation	CBH

*CBH: Associate Prof. Dr. Chew Boon How

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ASSOCIATE PROFESSOR DR. CHEW BOON HOW MD (USM), MMed Family Medicine (UM), PhD (Utrecht)



The main speaker is Associate Prof. Dr. Chew Boon How who was the top 2% scientist in clinical medicine disciplines in year 2019 and 2020, best clinical researcher in UPM in 2021, was trained in the world-renowned centre of clinical epidemiology Utrecht University Medical Center who graduated with a PhD degree while published > articles during that period of 4 years from both his PhD and collaborative research.

He is an Associate Professor of Family Medicine, a Consultant Family Medicine Specialist at Family Medicine Specialist Clinic Universiti Putra Malaysia Teaching Hospital (HPUPM), and also the Head of the Clinical Research Unit in HPUPM. He was a research mentor in the Advanced Training in Family Medicine (ATFM) the Graduate Certificate in Family Medicine (GCFM), the postgraduate qualification of the MAFP/icFRACGP (International Conjoint FRACGP) by the Academy of Family Physicians of Malaysia.

He is a Visiting Senior Lecturer to King's College London for the Malaysian GestatiOnal Diabetes and prevention of DiabtES Study (MYGODDESS) (2020- 2022). He is a Member of the International Committee for Talent Development with the Danish Diabetes Academy (2018-2021). He is a board member in the Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia (JKEUPM). He was involved in the Scientific Review Board of the Institute for Health Systems Research, and the Committee for Research Assessment (JPP-NIH), National Institute of Health Malaysia, Ministry of Health Malaysia. He was an associate editor and quest editor for Malaysian Family Physicians, World Journal of Diabetes, Frontiers in Endocrinology and Asia Pacific Journal of Public Health.

His research is mainly on diabetes mellitus focusing type 2 diabetes and gestational diabetes mellitus beside other chronic diseases and healthcare issues related to health behaviours and psychosocial wellbeing. He is skilled in clinical epidemiology.

He had been supervising > 5 PhD, > 5 MSc and > 5 MMed students. He has been involved in more than 30 clinical research, >20 of which is as the principal investigator, and >10 are clinical trials. Had published > 70 journal articles, > 4 books, and 5 chapters, > 5 teaching materials, 2 training manuals, 2 national reports (diabetes and asthma) and a few monographs.

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PROFESSOR DATIN DR SHERINA MOHD SIDIK

MBBS (Malaya), Family Medicine (UKM), Community Health (Auckland)



Sherina Mohd Sidik is a Professor & Consultant in Family Medicine at the Faculty of Medicine & Health Sciences, Universiti Putra Malaysia. She was Deputy Director of the Cancer Resource and Education Centre, Universiti Putra Malaysia from 2016-2020. Professor Sherina's research interests focuses mainly on mental health and behavioural intervention in the community and primary care settings. She has been lead / principal investigator for many research in these areas and has more than 150 publications in international and local journals and books. Prof Sherina has received several awards for her publications, namely the national award "Anugerah Akademik Negara" for "Anugerah Penerbitan Makalah Jurnal" in 2019, the "Anugerah Hadiah Fellowship Naib Canselor" from Universiti Putra Malaysia for "Anugerah Penerbitan Makalah Jurnal" in 2018, "Insentif Makalah Jurnal" in 2016 and "Anugerah Penyelidik Berprestasi Tinggi Fakulti Perubatan dan Sains Kesihatan" in 2019. She is among the eight Faculty of Medicine and Health Sciences, UPM academicians who were listed under the 'World's Top 2% Scientists (Single Year Achievement)" in 2020.

Professor Sherina collaborates closely with the Malaysian Ministry of Health, as well as with several other national and international organisations; namely the World Organisation of Family Doctors (WONCA Working Party on Research) and Oxford International Primary Care Research Leadership Programme, United Kingdom. She is currently appointed as an international advisor in the Advisory Committee for the Primary Health Care Research Consortium, which has members from USA, Africa, Australia, New Zealand, Lebanon, Bangladesh and India. Professor Sherina served as an Editorial Board Member in two well recognised and established Malaysian journals; the Medical Journal of Malaysia (2016-2020), and the Malaysian Journal of Medicine & Health Sciences (2011-2018). She was guest editor for the Malaysian Armed Forces Journal (2017-2018). She also served in the International Advisory Board for the Journal of Primary Health Care, New Zealand (2013-2014). She has supervised more than 20 PhD and 18 MSc students as supervisor and co-supervisor, including more than 50 medical students in their research projects.

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Author ID: 8285851400

Researchgate Profile: https://www.researchgate.net/profile/Sherina-Mohd-Sidik

Scholar Google profile: https://scholar.google.com/citations?hl=en&user=IBYXXtgAAAAJ

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PROF. DR. JOHNSON STANSLAS

Johnson Stanslas obtained his Ph.D. degree in the field of Cancer Pharmacology from the School of Pharmacy at The University of Nottingham (UK) in 1998. He carried out his doctoral research under the supervision of Prof. Dr. Malcolm Stevens, the discoverer of the brain tumour drug temozolomide (TEMODAR®). Upon returning from the U.K, he joined Universiti Putra Malaysia (UPM) as a lecturer in December 1998. He was promoted to senior lecturer in 2004 and subsequently, Associate Professor in 2006. In April 2013, he was appointed to the rank of full professor. He has been the Head of the Pharmacotherapeutics Unit at the Department of Medicine, Faculty of Medicine and Health Sciences, UPM, since 2009, and is the leader of the informal research group 'Cancer Research and Drug Discovery (CRDD)' which was established on the 13th December 2002. He is currently heading the Precision Medicine Research Group at the Faculty of Medicine and Health Sciences, UPM. He is actively involved in the discovery and preclinical development of new anticancer and anti-inflammatory agents (for allergic asthma and neuroinflammation). To date, he has been successful in discovering lead anticancer molecules for the treatment of breast, prostate, colon, and pancreatic cancers. His research also extends to efficacy and toxicity studies of cytotoxic and molecular targeted agents in cancer patients with the intention of translating laboratory findings to the clinic, for improvement in cancer management. He recently concluded a study looking at the pharmacogenomics and pharmacometabolomics of SSRIs in major depressive disorder patients. To date, he has received several research grants amounting to almost RM 6 million from local funding bodies, such as the Ministry of Higher Education (MOHE), Ministry of Science, Innovation, and Technology (MOSTI), Ministry of Agriculture (MOA) as well as UPM, for projects related to drug discovery and translational medicine. Through international collaborations involving Singapore and the USA, he has secured joint grants which are based in the hosting countries. He has also collaborated with several research institutes and industries, such as the School of Pharmacy, University of Nottingham (United Kingdom); Institute of Cancer Research (University of Bradford, United Kingdom); Universiti Malaya Medical Centre, Universiti Kebangsaan Malaysia Medical Centre, the University of Texas Health Science Center at Houston, UTHealth (USA), Department of Pharmacology (Yale University, USA) and Autoimmune Sdn. Bhd. (Malaysia). Thus far, 26 Ph.D. and 27 MSc students have successfully graduated under his supervision. He has more than 130 publications within his area of specialty and has been published in reputable international peer-reviewed journals. As of 2022, his publications have been cited 2359 times with an H-index of 24, as tracked by SCOPUS, and more than 3620 times with H- and i10-indices being 31 and 72, respectively, as tracked by Google Scholar. He has been invited to present his research at plenaries as well as been an invited speaker at local and international conferences. He frequently evaluates local and international grant proposals. He serves as a consulting editor of Pharmacological Research and an editorial board member of Cancer Management and Research, Oncologie and Current Pharmacogenomics and Personalized Medicine. He has been a reviewer for many international journals in the fields of pharmacology and therapeutics. He founded and is the current President of the Malaysian Association of Cancer Research (MACR) as well as a committee member of the Malaysian Society for Music in Medicine (MSMM). He is a member of the American Society for Pharmacology and Experimental Therapeutics (ASPET), American Association for Cancer Research (AACR), Malaysian Oncological Society (MOS), and Malaysian Society for Neuroscience (MSN). He has been a member of the Universiti Putra Malaysia medical research ethics committee since 2008 and presently serves as the Chair of the Post Approval Sub-committee (PASC).



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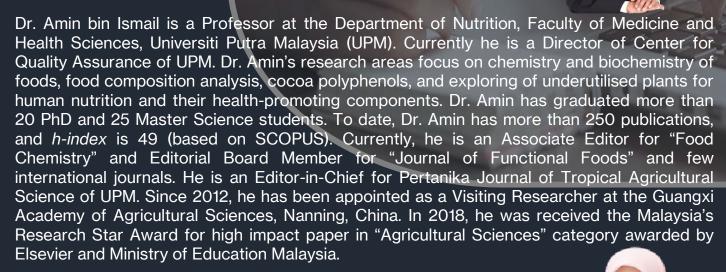
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PROF. DR. AMIN BIN ISMAIL



DR IRMI ZARINA ISMAIL

MD (USM), MMed Family Medicine (UM)

A Consultant Family Medicine Specialist at Family Medicine Specialist Clinic Universiti Putra Malaysia Teaching Hospital (HPUPM), and the Head of the Department of Family Medicine, Faculty of Medicine and Health Sciences, UPM. She has deep interest in teaching. She is a research mentor in the Advanced Training in Family Medicine (ATFM) the Graduate Certificate in Family Medicine (GCFM), teaches Clinical Audit at the Diploma in Family Medicine and frequently involved in talks on qualitative study

She is a current associate editor for Malaysian Family Physicians and has assisted in reviewing many papers from PLOS One and MFPJ. She is also the current secretary for Qualitative Research Association Malaysia.

Her research is mainly on diabetes mellitus focusing type 2 diabetes and preconception care besides having involved in creating reproducible learning objects for medical students and patients. Her PhD study mainly involved qualitative study especially in the case study design. She had been supervising > 5 MMed students and co supervise >5 PhD and Master of Science Students.

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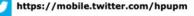
DR. ZAHIRA MOHD ISHAN

DR. Zahira MOHD. ISHAN is a Deputy Director of Putra Science Park (PSP), Universiti Putra Malaysia (UPM) and an Associate Professor at the School of Business and Economics, UPM. She obtained a degree of Laws (Hons.) from the International Islamic University Malaysia in 1994, a Master of Laws in Commercial and Corporate Law from the University of London in 1996, and a PhD in Business Law from UPM in 2008. She also attended certified courses relevant to technology transfer managers, namely the series of Technology Transfer Workshop under the Alliance of Technology Transfer Professionals (ATTP); the JPO/IPR Training Course for IP Trainers 2018; the Licensing Academy by PIPRA and UC Davis School of Law 2014; SRI's Five DOI 2014; SRI's Venture Plan Essentials Boot Camp 2013, and Professional South East Asian Patent Drafting Course (SEAD) 2013, apart from several other seminars and courses on technology transfer and commercialization. She was also a Professional Trainer (MIM-CPT) (Malaysian Institute of Management) in 2010-2012.

Dr Zahira joined UPM in 1994 and PSP in 2013. She has the experience teaching Business Law, Company Law, International Trade Law, Franchising Law and Intellectual Property (IP) Law courses and her research interest is in legal business relation and IP. As a Deputy Director, she is responsible for managing UPM's intellectual property protection and experienced in negotiations for IP matters in research collaboration, joint ownership, licensing and assignment deals. She speaks on the issues of intellectual property rights and intellectual property management in seminars and workshops at the national and international levels. She had also actively participated in a series of the World Intellectual Property Organization (WIPO) regional meetings for the establishment of the Technology and Innovation Support Centre (TISC) in Malaysia and in UPM as well as the Enabling the IP Environment (EIE) Project. Her contribution to IP management in UPM includes bringing up the university's name by winning the National IP Award for the Best Organization in IP Management in 2014, 2016, 2017 and 2018. DrZahira is also actively involved in a non-profit association for the technology managers of Malaysia, namely the Innovation and Technology Managers Association (ITMA) Malaysia since 2015, where she held the post of Secretary of ITMA Malaysia for the 2016/2017 and 2017/2018 sessions, Assistant Secretary for the 2018/2019 session, and currently appointed as Committee Member for 2020/2022 session. She was also appointed as a member of Franchise Advisory Board (2007-2009) and became a member of the Malaysian Franchise Association.



PERTANIAN •











NURFAIZAH SAIBUL

BSc. Nutrition and Community Health (UPM), MSc. Community Nutrition (UPM)



Nurfaizah Saibul is a research officer at the Clinical Research Unit (CRU), Hospital Pengajar Universiti Putra Malaysia (HPUPM). She formerly worked as a social research officer at Institute for Social Science Studies (IPSAS), Universiti Putra Malaysia from 2011 to 2013. She worked as a research officer at the Cancer Resource and Education Center (CaRE), Universiti Putra Malaysia from 2014 to 2021. She had many years of experience in conducting social science research, health promotion activities, and community intervention programs. She had experience in industry and community relations activities, particularly in cancer education, awareness, and support. She had several publications in journal articles (2 as author and 2 as co-author) and research book chapters (2 books) and was actively involved in popular writing. She is being trained to be a speaker and facilitator in research development programs and activities in CRU to help researchers in HPUPM on research, particularly on clinical trials. Currently, she was certified in good clinical practice (GCP) and is looking forward to conducting clinical trials for future endeavors.

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SALWANA BINTI AHMAD

BSc. (Hons) Science (Biology Genetic) (UKM), MSc. Science (Environmental) (UOW) Ph.D. Candidate (Biotherapeutic), UPM

Salwana Ahmad is a Research Officer at Clinical Research Unit (CRU), Teaching Hospital, Universiti Putra Malaysia. She was previously appointed as a research officer in the Cancer Resources and Education Centre with 5 years of experience in the Community Research and Cancer Education Program. She also leads administration tasks for Internal UPM Audit, 5S, and EKSA. Currently, she held a position in CRU as a research officer for Clinical and Health Sciences related research mainly for providing support services for clinicians and research members in HPUPM. She led Randomization Services and lead two ongoing Research protocols for Research Integrity and Evidence-Based Medicine while supporting other services in CRU. She contributes as Papers Editor in the RECRUS Research Newsletter. She believes that written and analytical skills are part of academic excellence in critical thinking, thus proceeding with her Ph.D. in Clinical Trial Polit study as part of knowledge enhancement for her future career.

NURUL IMAN HAFIZAH BINTI ADANAN

BSc. Nutrition and Dietetics (Hons) (UiTM), MSc. Clinical Nutrition (UPM)

Iman is a research officer at Clinical Research Unit (CRU), HPUPM. She is a dietitian by qualification and has obtained her postgraduate degree in MSc. Clinical Nutrition from UPM in 2017. Previously, she was a lecturer at MAHSA University and was the key person for Academic Writing module for undergraduate students. During her postgraduate research, she has published several papers in JCIindexed journals. In 2018, she was awarded Education Grant by Malaysian Dietitian Association (MDA) to present her research works at the International Conference of Renal Nutrition and Metabolism (ICRNM). Her passion in research and writing has awarded her best research presenters and most recently, Best Thesis Award (2nd prize) from MDA in 2021. Currently, she is a Paper Editor for CRU RECRUS Newsletter. She has delivered a webinar on "Key Points in Academic Writing" in 2021 targeting postgraduate students and early career researchers. This year, she hopes to extend her experiences and knowledge to help researchers to write better.

Linkedln: https://my.linkedin.com/in/nurul-iman-hafizah-adanan-835190194







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1. The 6th International Clinical Trials Methodology Conference 2022. https://ictmc.org/



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Registration

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Event Date

3rd - 6th October 2022

9

Event LocationHarrogate Convention Centre, UK

Email Us ictmc@in-conference.org.uk

2. UPDATE: ABSTRACT SUBMISSION CLOSED. 9th International Congress on Peer Review and Scientific Publication (Abstract Submission Extended)

https://peerreviewcongress.org/



- Editorial on September 20, 2021. John P. A. Ioannidis et al. Ninth International Congress on Peer Review and Scientific Publication Call for Abstracts. JAMA. 2021;326(13):1265-1267. doi: 10.1001/jama.2021.16596.
- Editorials published 20 September 2021. John P. A. Ioannidis et al. Ninth international congress on peer review and scientific publication—call for abstracts. BMJ 2021;374:n2252.
 doi: 10.1136/bmj.n2252.





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9TH ASIA PACIFIC
PRIMARY CARE
RESEARCH
CONFERENCE
Therme: Research In The New Norm
01 - 03 December 2022
Thursday - Saturday
Virtual Conference

Chairperson

Welcome

Note

Dear friends and colleagues,

On behalf of the organising committee, it is my great pleasure to invite you to the 9th Asia Pacific Primary Care Research Conference hosted by the Malaysian Primary Care Research Group, an ancillary group of the Academy of Family Physicians Malaysia.

CPD Point will be awarded

The theme of the conference this year is "Research in the New Norm", aptly chosen in line with the advancement in information technologies since the COVID-19 pandemic. Our aim is to guide researchers in conducting research following new norms and in using digital technologies.

The conference will be held virtually on the 2nd to 3rd of December, 2022 (Friday and Saturday) and will be preceded by the Research Championship Workshop on the 1st of December 2022 (Thursday).

The research championship workshop is specifically designed for budding researchers to build and enhance their research projects. They will be guided by experienced researchers from the Asia Pacific region. Selected groups will have the opportunity to present their proposed projects with chances of winning exciting prizes.

We look forward to welcoming participants across the globe, particularly from the Asia Pacific region, to share their research projects, especially those conducted during the last two challenging years. See you virtually in December!

Associate Professor Dr Noor Azimah Muhammad Organising Chair



For more information on the conference, click [HERE]

5-6 July 2022 8.30am to 4.30pm

Cube, FOM Level 4

UM Student / RA: RM300 UM Staff: RM400 Non UM: RM500

2

Quantitative Methodology **Workshop for Health Research**

SPEAKERS

In order to gain the most out of the workshop, please: Come prepared with a research question - Download SPSS in your laptop/desktop - Make sure you have functioning video camera and microphone for virtual discussion

SYNOPSIS

Many health research questions are answered using quantitative methods, which involve selecting an appropriate study design, choosing a sampling method and using valid and reliable research tools. Therefore, understanding the principles and acquiring the necessary research skills are crucial before embarking on quantitative

This workshop aims to help novice researchers to acquire the knowledge and skills of conducting a quantitative research project through lectures, practical examples, interactive sessions and hands-on exercises. This course is particularly useful for health researchers who are at the stage of planning for a quantitative research project.

OBJECTIVES

At the end of the workshop, participants should be able to:

- Understand the range of quantitative methods
- Understand the strengths and limitations of each quantitative method
- · Select a suitable quantitative method to answer their research question
- Know the sampling methods and how to calculate sample size
- Design a questionnaire
- Understand the process of data collection in quantitative research
- Understand the basic quantitative analysis

SPEAKERS || FACILITATORS



Associate Professor Dr Pauline Lai Siew Mei



Dr Lee Yew Kong



Dr Ng Wei Leik



Dr Lim Hooi Min



Dr Teo Chin Hai

Organised by Research Office, Faculty of Medicine and University of Malaya Primary Care Research Group (UMPCRG)



motraining@um.edu.my **3** 03-7967 7515

Registration link: https://forms.gle/KZgrX5bFNwMZkbNi8

Payment link: https://epay.um.edu.my/

As the seats are limited, the registration will be closed after receiving 20 participants in total. Please do not hesitate to contact Ms. Haslinda (03-7967 7515) or email rotraining@um.edu.my if you have any further queries.