Volume 3, Issue 24,
Sept 2023, 726- 811

RECRUS
Research Newsletter

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Highlights

[click to view]

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Editor's Notes

In this issue of the RECRUS Research Newsletter, we are excited to bring you a diverse array of content that highlights the dynamic and evolving landscape of clinical research and epidemiology.

In the realm of administrative changes, we bid farewell to Faridzatul Syuhada Binti Abdul Rashid, the Administrative Officer of the Clinical Research Unit, effective from 07 August 2023. We extend our gratitude for her contributions to our research endeavors.

Pusat Pengurusan Penyelidikan has introduced amendments to research grant agreement application forms, effective from 1 August 2023. These updates can be accessed at link, streamlining our grant application processes. We share noteworthy research articles on decentralized clinical trials, shedding light on the ethical opportunities and challenges presented by this emerging approach. We celebrate the accomplishments of grant winners and present abstracts that showcase the fruits of their labor, underscoring the tangible impact of their work.

In MJH Series 19, Ms. Salwana explores the "Comparative Effectiveness of Aspirin Dosing in Cardiovascular Disease." We offer insights from recent seminars on topics such as identifying and managing missing data and outliers, data management with REDCap, and collaboration and networking in clinical research. We also provide access to valuable resources and articles that explore the evolving landscape of decentralized clinical trials and digital health technologies. Stay updated with upcoming events and opportunities in the Announcements section. As we navigate the ever-evolving field of clinical research and epidemiology, this issue of the RECRUS Research Newsletter serves as a valuable resource for staying updated, informed, and inspired. We look forward to sharing these insights and opportunities with our dedicated community of researchers and practitioners.

[Chief Editor written with an assistance from ChatGPT 3.5]

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Pn. Salwana Ahmad (Papers Editor)
Pn. Nurfaizah Saibul (Papers Editor)
Cik Nurul Iman Hafizah Adanan (Papers Editor)
Dr. Nur Aazifah Ilham (News Editor)
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Announcement

- MJH Series 21: 27th October 2023. 10.30 – 11.45 am.
- Research Colloquium series 3/23. Psychological Health Among Caregivers of Stroke Patients in HSAAS. 11 Oct 2023, 1400 – 1515.
- The Decentralized Trials & Research Alliance (DTRA) Annual Meeting Nov 5-8 in Boston.
- 23rd FERCAP International Conference.
- 8th World Conference on Research Integrity (Hybrid), 2-5 June 2024, Athens, Greece.
- Introduction to Decentralized Clinical Trials (DCTs). An online course by the Association of Clinical Research Professionals (ACRP).
- Wellcome Trust Funding Opportunities.
- Opportunities for collaborative research in Horizon Europe: Energy, Climate Action & Mobility
- Data Science Training -- CODATA Data Science Training list
- International Data Week (IDW)
- Applications Now Open for the 2024 SEEKCommons Fellowship
- Good Clinical Practice. Series 3/2023. 14 – 16 November 2023
- BMJ Case Reports Journal Subscription by Dept. of Psychiatry

SECTION A

RECRUS RESEARCH NEWSLETTER IS NOW CSTR CERTIFIED

We are delighted to announce that our newsletter is now officially certified and accessible through the Common Science and Technology Resource Identification (CSTR) platform!

CSTR Identification Platform (https://www.cstr.cn/en) provides unique identification service for global scientific data, papers, scientific institutions, researchers, scientific instruments, patents and other scientific and technological resources. It has the same function as the commonly known DOI (digital object identifier).

The persistent identifier is taken as the essential part of the "Open science infrastructures" as well as the one of the "Investing in open science infrastructures and services". CSTR is the global identifier for common science and technology resources, it is the committed practitioner of the global open science, fostering the PID infrastructure for open science. Therefore, each of the article published in our newsletter will now have its own unique CSTR identifier.

CSTR AGENCY CERTIFICATION

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CSTR Prefix : 33294

Allocated time : 2023-09-08

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CSTR: https://www.cstr.cn

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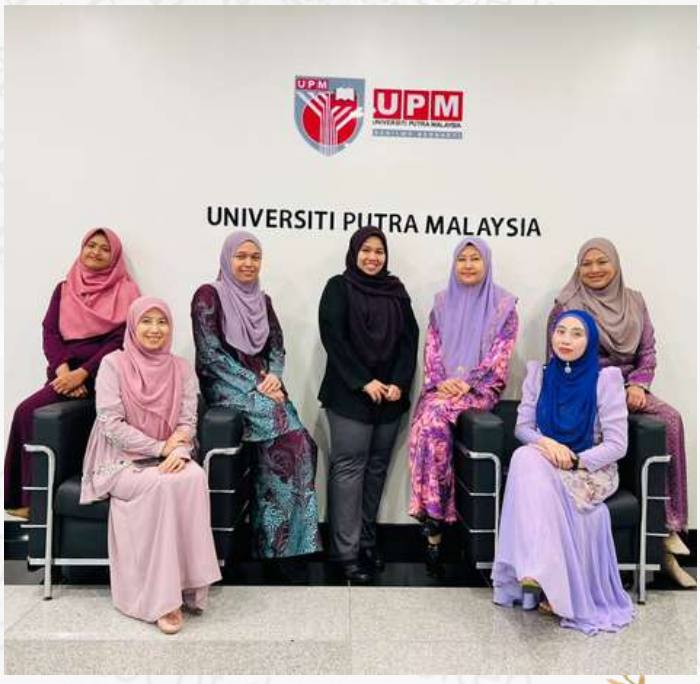
BEST WISHES TO OUR DEAREST FRIEND, MS. SYUHADA

It is with mixed emotions that we bid a fond farewell to our esteemed colleague, Ms. Syuhada, who has served as our dedicated administrative officer since 2020. Being the first officer to set the CRU, Ms. Syuhada has been a vital member of our unit, and she is now embarking on a new chapter with the Human Resource Service Unit, HSAAS. She has been more than just a colleague; but also a dear friend who has brightened our days in CRU.

Ms. Syuhada has been the cornerstone of our administrative operations, and her contributions have been invaluable. Beyond her professional excellence, her warm and approachable persona, coupled with her willingness to assist at her utmost best has created a positive and collaborative atmosphere in our workplace.

While we are saddened to bid farewell to someone who has been such an integral part of our team, we are also excited about the opportunities that await her in her new role. We have no doubt that she will bring the same level of dedication and expertise to her new role, making her future colleagues fortunate to have her on their team, and enhancing the operation of human resource management in HSAAS.



Syuhada, we are sincerely thankful for your constant dedication, support and this treasured friendship. As you step into this new adventure, we sincerely wish that your journey will be brimmed with success, contentment and happiness all along. May your journey be filled with exciting opportunities and rewarding experiences. You will always be a part of CRU family, and our door here will remain open for you. The friendship we have built and all of our sweet memories will be in our hearts forever.

With heartfelt regards,

Clinical Research Unit HSAAS

AP. DR. CHEW BH, DR. AAZIFAH, SALWANA, FAIZAH, IMAN, WZN, INTAN

Best of Luck

We are pleased to announce that CRU's medical officer, Dr. Nur Aazifah Ilham will be embarking on a postgraduate study in Medical Statistics. She has been granted a study leave for a period of two years, effective on 16th October 2023.

Our heartfelt best wishes to you, Dr. Aazifah. May you make the most of this incredible opportunity and wishing you success in this new adventure!

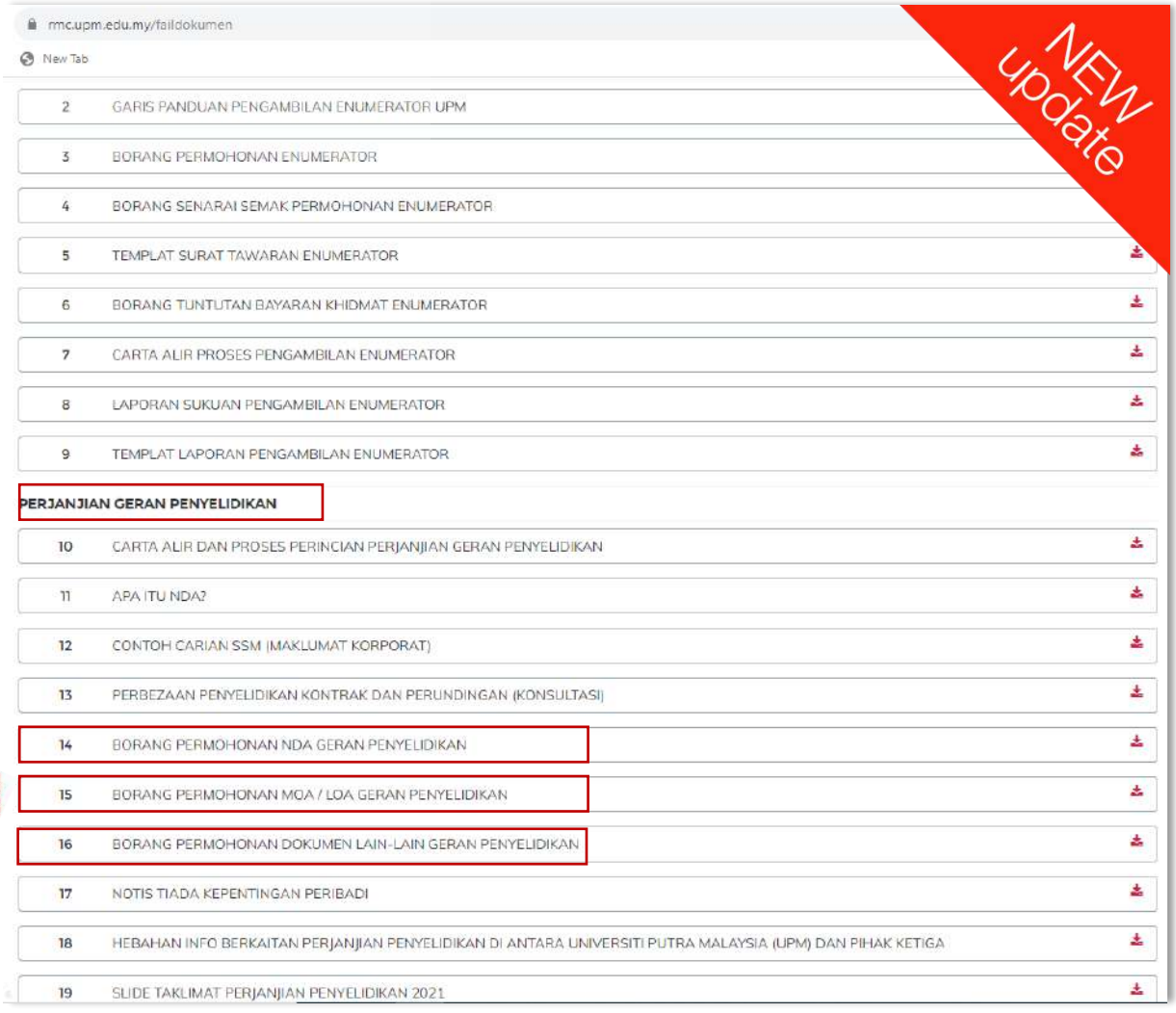
NEW UPDATE

BREAKING NEWS

RESEARCH GRANT AGREEMENT APPLICATION FORMS

Research Management Center (RMC), Universiti Putra Malaysia has made amendments to the research grant agreement application forms (https://rmc.upm.edu.my/faildokumen). This is to be used from August 1, 2023.

1) **Borang Permohonan NDA Geran Penyelidikan**
2) **Borang Permohonan MoA / LoA Geran Penyelidikan**
3) **Borang Permohonan Dokumen Lain-Lain Geran Penyelidikan**



JKEUPM UPDATE

Exemption of JKEUPM approval of research protocols to be conducted OUTSIDE of UPM by all UPM researchers and students, but only institutional review board (IRB) from where the study is going to be carried out.

EFFECTIVE FROM 1ST SEPT 2023

DECENTRALISED CLINICAL TRIALS: ETHICAL OPPORTUNITIES AND CHALLENGES

Lancet Digit Health. 2023 Jun;5(6):e390-e394. https://doi.org/10.1016/S2589-7500(23)00052-3

"In this Health Policy report, which is informed by both traditional research ethics and digital ethics frameworks, we group the related ethical issues under three areas requiring increased ethical vigilance: participants' safety and rights, scientific validity, and ethics oversight. Our aim is to describe these issues, offer practical means of addressing them, and prompt the delineation of ethical standards for decentralised trials."

"Our analysis draws on both clinical research ethics and digital ethics frameworks, which are premised on substantive principles (eg, respect for persons, beneficence, and justice) and incorporate procedural values (eg, ensuring responsiveness, sound research design, and transparency). Although elaborating on the conceptual foundations for these frameworks is beyond the scope of this Health Policy report, we use these frameworks to help identify and evaluate the ethical issues associated with DCTs. We describe three broad areas requiring increased ethical vigilance:

01 Participants' safety and protection of their rights

02 Scientific validity

03 Ethical oversight mechanism

Some interesting tools mentioned/indicated in the paper:

Click to Read

Privacy impact assessment

https://doi.org/10.1016/j.clsr.2009.02.002

Digital proficiency assessment tools eg. DigiComp2.1

https://publications.jrc.ec.europa.eu/repository/handle/JRC106281

The European Clinical Research Infrastructure Network (ECRIN) Toolbox

https://ecrin.org/tools

ICTD 2023: DECENTRALISED CLINICAL TRIALS CHALLENGES AND OPPORTUNITIES

The European Clinical Research Infrastructure Network (ECRIN) together with Polish national partner, PolCRIN, represented by the Polish Medical Research Agency, organised International Clinical Trial Day (ICTD) 2023 in Warsaw, Poland.

Some of the overarching conclusions of the day include:

- Clear communication with all stakeholders is crucial. This includes with the patients but also all those new stakeholder that will be engaged with trial from logistics through to data.
- The use of technology can facilitate the implementation of the decentralised clinical trial, from electronic consent to devices that feedback data directly or online questionnaires forms, but the selection of these tools must be made carefully and requires support from all stakeholders from beginning to end.

REC

Watch replays of recorded talks and discussions during the International Clinical Trial Day (ICTD) 2023 on decentralised clinical trials here

SECTION B

RESEARCH ACHEVEMENTS AND IMPACTS

This section highlight the researchers' great achievements in the fields including the grants granted, sharing of successfull pathway and other outstanding achievements that becomes a precious journey forfor other researchers to learn and follow.

'Success is best measured by the achievers'

WORLD'S TOP 2% SCIENTIST *in*

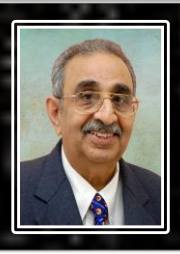
FACULTY OF MEDICINE AND HEALTH SCIENCES & HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS), UNIVERSITI PUTRA MALAYSIA

2023

*The ranking is based on Scopus citation data till 31 December 2022 standardized and adjusted according to citation patterns

CAREER-LONG WORLD TOP 2% SCIENTIST

ASSOC. PROF. DR. SARVA MANGALA PRAVEENA
DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH,
FACULTY OF MEDICINE AND HEALTH SCIENCES
ENVIRONMENTAL SCIENCES
Rank: 236739



PROF. DATUK DR. LEKHRAJ RAMPAL A/L GYANCHAND RAMPAL
DEPARTMENT OF COMMUNITY HEALTH,
FACULTY OF MEDICINE AND HEALTH SCIENCES
GENERAL & INTERNAL MEDICINE
Rank: 402619

PROF. DATIN DR. SHERINA BINTI MOHD SIDIK
DEPARTMENT OF PSYCHIATRY,
FACULTY OF MEDICINE AND HEALTH SCIENCES
GENERAL & INTERNAL MEDICINE
Rank: 462245

SINGLE-YEAR WORLD TOP 2% SCIENTIST

ASSOC. PROF. DR. SARVA MANGALA PRAVEENA
DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH,
FACULTY OF MEDICINE AND HEALTH SCIENCES
ENVIRONMENTAL SCIENCES
Rank: 45978

PROF. DR. CHING SIEW MOOI
DEPARTMENT OF FAMILY MEDICINE,
FACULTY OF MEDICINE AND HEALTH SCIENCES/
HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS)
GENERAL & INTERNAL MEDICINE
Rank: 262813

PROF. DATUK DR. LEKHRAJ RAMPAL A/L GYANCHAND RAMPAL
DEPARTMENT OF COMMUNITY HEALTH,
FACULTY OF MEDICINE AND HEALTH SCIENCES
GENERAL & INTERNAL MEDICINE
Rank: 199601

DR. NAVIN KUMAR A/L DEVARAJ
DEPARTMENT OF FAMILY MEDICINE,
FACULTY OF MEDICINE AND HEALTH SCIENCES/
HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS)
GENERAL & INTERNAL MEDICINE
Rank: 328078

PROF. DR. HAMIDON BIN BASRI
DEPARTMENT OF NEUROLOGY
FACULTY OF MEDICINE AND HEALTH SCIENCES/
HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS)
GENERAL & INTERNAL MEDICINE
Rank: 470275

ASSOC. PROF. DR. CHEW BOON HOW
DEPARTMENT OF FAMILY MEDICINE,
FACULTY OF MEDICINE AND HEALTH SCIENCES/
HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS)
GENERAL & INTERNAL MEDICINE
Rank: 240080

PROF. DATIN DR. SHERINA BINTI MOHD SIDIK
DEPARTMENT OF PSYCHIATRY,
FACULTY OF MEDICINE AND HEALTH SCIENCES
GENERAL & INTERNAL MEDICINE
Rank: 348599

CONGRATULATIONS!

Related link:
https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

TOTAL AMOUNT: RM 1,364,093.00

DR. SUHAILI ABU BAKAR @ JAMALUDIN
Department of Biomedical Science
RM 177,400.00

ASSOC. PROF. DR. THAM CHAU LIM
Department of Biomedical Science
RM 145,170.00

DR. SANDRA A/P MANIAM
Department of Human Anatomy
RM 146,632.00

PROF. DR. JULIANA JALALUDIN
Department of Environmental and Occupational Health
RM103,420.00

DR. NARCISSE MARY A/P SITHER JOSEPH VESUDIAN
Department of Medical Microbiology
RM 131,500.00

DR. ELYSHA NUR ISMAIL
Department of Biomedical Science
RM 177,297.00

ASSOC. PROF. DR. CHEE HUI YEE
Department of Medical Microbiology
RM149,500.00

PROF. DR. SYAFINAZ AMIN NORDIN
Department of Medical Microbiology
RM193,474.00

PROF. DR. BARAKATUN NISAK MOHD YUSOF
Institute for Social Science Studies (IPSAS)/ Department of Dietetics
RM139,700.00

Heartiest congratulations to all the receivers!

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Elucidating The Role of Polymorphisms in SLC22, MATE and ATM Genes on The Pharmacogenetics of Metformin among Three Major Ethnics of Malaysian Type 2 Diabetes Mellitus (T2DM) Patients

RM 177,400.00

1 October 2023 - 30 September 2026 (3 years)

Team members:

1. Prof. Ts. Dr. Cheah Yoke Kqueen
2. Ts. Dr. Sharifah Sakinah Syed Alwi
3. Dr. Ng Ooi Chuan

Principal Investigator:
DR. SUHAILI ABU BAKAR @ JAMALUDIN

Aim:
This project aim to proof the role of polymorphisms in these three genes with T2DM risk, and metformin response among the three Malaysian major ethnic.

Why is it important?
In managing the T2DM's patients, metformin is the most commonly used as an oral antidiabetic drug that lowers the serum glucose level (HbA1c) however, individual differences in glycaemic response to metformin exist widely including Malaysian, unfortunately lack scientific evidence. Previous studies reported polymorphisms in the SLC22, MATE and ATM genes can indirectly affect the glycaemic response, and influence the rate of control of T2DM. Findings from this study will provide a useful resource for the T2DM progression, and enable the identification of the precise drug dosage that is most likely to be effective and safe for each patient and reduce the economic impact on a global scale.

How will it be done?
This case-control study will involve with the collection of genomic DNA from both non-T2DM (n=267) and T2DM groups (n=267) from the blood samples. In both groups, about 89 samples from each ethnics: Malays, Indian and Chinese. Generally, genotyping of the SLC22, MATE and ATM variants will be performed using Restriction Fragment Length Polymorphisms (RFLP). Primers will be designed to specifically amplify the polymorphisms in those three genes. Then, amplification of polymorphisms for those genes will be performed by using Polymerase Chain Reaction (PCR). The amplification products then will be digested with specific restriction enzymes to differentiate the genotypes between the subjects. Gel electrophoresis will be performed to observe the different fragment length size that represent the genotype of subjects. Genotypes and allelic distributions for each polymorphisms will be collected and effect of the polymorphisms on the glycaemic response and other clinical parameters will be analysed. 30 selected samples that represent each group of genotypes; homozygous wild type (n=10), heterozygous (n=10) and homozygous mutant (n=10) will then be prepared for DNA sequencing to further validate the genotype. The samples will be amplified again for the purpose of DNA sequencing and the reading of DNA sequencing will be outsources.

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Inhibition of Human Mast Cell Tryptase by Gabexate Mesylate and Argatroban in Dengue Virus-Induced Vascular Leakage: Potential Repurposing of Drugs for the Treatment of Dengue

RM 145,170.00

October 2023 – September 2025 (2 years)

Team members:

1. Prof. Dr. Daud Ahmad Israf Ali
2. AP. Dr. Chee Hui Yee
3. AP. Dr. Yong Yoke Keong
4. Dr. Hanis Hazeera Harith
5. Dr. Anim Md Shah

Principal Investigator:
ASSOC. PROF. DR. THAM CHAU LIM

Aim:
This study aims to investigate the effects of approved drugs in inhibiting tryptase activity released by DENV-induced mast cells, as well as their effects on DENV-induced vascular permeability caused by mast cell tryptase.

Why is it important?
Dengue hemorrhagic fever (DHF) is a severe form of dengue with the hallmark of vascular leakage and may lead to mortality. To date, there is no effective treatment for DHF apart from supportive care. Tryptase, the most abundant protein in mast cells, has been recently found to be implicated in the pathogenesis of DHF by breaking endothelial tight junctions and causing vascular leakage. Hence, drugs with the ability to inhibit mast cell tryptase activity could be the potential treatments for dengue virus (DENV)-induced vascular leakage. Unfortunately, none of the tryptase inhibitors has successfully passed all stages of clinical studies.

How will it be done?
The study will be conducted using an in vitro model of vascular leakage which will be designed according to clinical insights.

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Exposure Assessment of Bioaerosol and Leukotriene B4 (LTB4), Resolvins E-series(rvei) as Biomarkers of Airway Inflammation Among Preschoolers in the Selected Areas of Klang Valley

RM 103,420.00

1 October 2023 - 30 September 2026 (2 years)

Team members:

1. Dr. Khairul Nizam Mohd Isa (UNIKL)
2. Prof Syafinaz Mohd Amin (UPM)
3. Prof. Dr. Mohd Nasir Mohd Desa (UPM)
4. Dr. Suhaili Abu Bakar (UPM)

Principal Investigator:
PROF. DR. JULIANA JALALUDIN

Aim:
This study aims to evaluate the association between exposure to indoor bioaerosols and airway inflammation among preschool children in selected areas of the Klang Valley. This study responds to emerging local needs by improving the data on the detection of microbiome specifically on the mechanism of how exposure impacts and characterizes health risks among preschool children.

Why is it important?
Early-life exposure to bioaerosol could lead to recurrent irritation and immune activation in the respiratory tract, inducing prolonged inflammation, that promote the inflammation related diseases, such as asthma and rhinitis. There are still limitations and a gap in the study of the association between indoor bioaerosol and their health effects on occupants because of the difficulty in sampling procedures of microbes. The absence of a universal method to explore fungal exposure in indoor settings due to the limitations of the actual existing methods and the ubiquitous nature of microbial spores.

How will it be done?
Study Location:
Preschool children in selected areas in Klang
Methodology:
Activity 1 - Measurement of Indoor Air Quality
Collection of Settled Dust Samples
Activity 2- Settled Dust Extraction and Analysis using Metagenomics Protocol
Activity 3 – Collection of Exhaled Breath Condensate (EBC) Sample and Quantification of RvE1 and LTB4 in EBS Samples

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Skin Microbiome Diversity, Vitamin D Variation and Sociodemographic Characters of Non-melanoma Skin Cancer Patients

RM 131,500.00

1 October 2023- 30 September 2026 (3 years)

Team members:

Prof. Dr. Syafinaz Binti Amin Nordin
AP. Thilakavathy A/P Karuppiah
Dr. Razana Binti Mohd Ali
Dr. Izety Shezlinda Binti Noran

Principal Investigator:
DR. NARCISSE MARY A/P SITHER JOSEPH VESUDIAN

Aim:
The study aims to determine skin microbiome diversity, vitamin D variation, and sociodemographic factors as risk factors for non-melanoma skin cancer (NMSC).

Why is it important?
The study identifies novel risk factors, correlation of skin microbiome profile, and serum vitamin D level in NMSC patients. The findings of the study (identifying novel risk factors) are aligned to reduce the negative impact of cancer by decreasing the disease morbidity, and mortality and improving the quality of life.

How will it be done?
1. Determination of the sociodemographic factors skin associated to NMSC patients
2. Comparison of the skin microbiome composition in different stages of NMSC patients and healthy individuals to identify the differences of skin microbiome compositions among NMSC patients compared to that in healthy skin.
3. Study the serum vitamin D level in NMSC patients and in healthy controls to identify the relationship between serum vitamin D level and NMSC.

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Evaluating the Protective Role of Ellagic Acid against Inflammatory Bowel Disease through Regulation of NF-kB/STAT1 Activation in Intestinal Epithelial Cells

RM 177,297.00

02 October 2023 - 30 September 2026 (3 years)

Team members:

1. Prof. Sharmili Vidyadaran (UPM)
2. AP. Ts Dr. Reezal Ishak (UniKL-MESTECH)
4. Dr. Noraina Zakuan (UPM)
5. Dr. Zulkefley Othman (UPM)
6. Dr. Hussin Mohammad (IMR)

Principal Investigator:
DR. ELYSHA NUR ISMAIL

Aim:
The objective is to assess the impact of ellagic acid on active inflammation observed in chronic inflammatory diseases, such as inflammatory bowel disease. The overarching aim is to provide protection against the development or progression of chronic inflammatory diseases.

Why is it important?
- Inflammation is a natural defence mechanism of the immune system against foreign bodies and pathogens. Chronic inflammation occurs when the immune response becomes uncontrolled. This is when the immune response continuously targets tissue organs such as lungs, skin, guts and joints leading to damage.
- IBD has no cure and there is no standard regimen for managing all people with IBD. Patients with IBD have a slightly higher risk of colon cancer, blood clots and liver disease. Novel treatment options for IBD are continuously explored and novel drugs are being discovered.
- Studies on natural products (extracts and metabolites) have demonstrated effective treatment for IBD either used alone (as a compound) or in combination with other drugs in reducing intestinal inflammation and inducing tissue healing.
- IBD can be better understood and treated with great precision through targeted gathering, cross-linking and analysis of biological data.
- Our investigation of the cellular and molecular mechanisms underlying the genesis and regulation of inflammatory disease may help us understand the role of ellagic acid in lowering intestinal inflammation and encouraging tissue healing.

How will it be done?
- The study will assess the impact of ellagic acid on three distinct cellular responses triggered by three different inflammatory stimuli. These stimuli induce the production of inflammatory cytokines and chemokines, and the objective is to evaluate ellagic acid's ability to mitigate the effects of these stimuli.
- The mechanism of action of ellagic acid alleviates the cellular response is modulated by the NF-κB/MAPK signalling pathway and the JAK/STAT signalling pathway.
- The study seeks to establish ellagic acid's protective and wound-healing attributes regarding the intestinal epithelial barrier. This will be achieved through an analysis of barrier functions and the reduction of inflammation.

Congratulations!

WINNERS OF RESEARCH GRANT 2023

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 1/ 2023

Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Characterization of The Virulence Factors of Hypervirulent Group B Streptococcus (GBS) ST283 Isolated from Tilapia (Oreochromis spp.) and Human via Genomics, Proteomics, and Phenotypic Approaches

RM 193,474.00

1 October 2023 - 30 September 2026 (3 years)

Team members:

1. Prof. Madya Dr. Mohammad Noor Amal Bin Azmai
2. Prof. Ts. Dr. Mohd Nasir Mohd Desa
3. Dr. Mohd Hafis Yuswan Bin Mohd Yusoff
4. Dr. Narcisse Mary A/P Sither Joseph Vesudian

Principal Investigator:
PROF. DR. SYAFINAZ AMIN NORDIN

Aim:

1. To characterize the genomic and proteomics aspects of GBS ST283 isolated from human and fish samples in Malaysia.

2. To determine the pathogenicity of the collected GBS ST283.

Why is it important?

GBS ST283 is a hypervirulent strain of GBS that causes disease in human and fish, and cross-infects both hosts.The emergence of GBS ST283 has resulted in severe outbreaks among cultured tilapia in South East Asia's fish farming industries. Not only in fish, GBS ST283 also poses a public health challenge because it has been emerged as a zoonotic pathogen via the consumption of raw-farmed fish-dishes. For example, the GBS ST283 caused septicaemia meningitis in healthy adults following the outbreak in Singapore. Food Agriculture Organization (FAO), has identified GBS ST283 as a novel foodborne pathogen capable of causing serious health complications in humans and fish, and urged researchers to investigate the mechanisms through which GBS ST283 causes sickness and serious complications in humans and fish, which is currently unknown.

How will it be done?

This will be a laboratory-based study that investigate the genomic and proteomic aspects of ST283 (a virulent strain of GBS) from samples of fish and human. We will also investigate the virulence factors in ST283 from these samples and further with determining their pathogenicity in vitro.

GRANT WINNERS 2023

Congratulations!

DR. LOH WEI CHAO

Department of Neurology

For receiving an

International Industry-sponsored Clinical Trial Grant from Bayer (Malaysia) Sdn. Bhd.

RM539,034.00

19767/ OCEANIC-AF

"A multicenter, international, randomized, active comparator-controlled, double-blind, double-dummy, parallel-group, 2-arm, Phase 3 study to compare the efficacy and safety of the oral FXIa inhibitor asundexian (BAY 2433334) with apixaban for the prevention of stroke or systemic embolism in male and female participants aged 18 years and older with atrial fibrillation at risk for stroke"

1st July 2023 - 25th August 2025 (2 years)

Team members:

1. Prof. Dr. Hamidon Bin Basri
2. AP. Dr. Hoo Fan Kee
3. AP. Dr. Wan Aliaa Wan Sulaiman
4. AP. Dr. Liyana Najwa Inche Mat
5. Dr. Abdul Hanif Khan
6. Dr. Janudin Baharin
7. Dr. Anna Misyail Abdul Rashid
8. Dr. Azliza Ibrahim

Background:
The primary objectives of OCEANIC-AF are to determine the effects on the prevention of stroke and systemic embolism as well as compare the incidence of International Society on Thrombosis and Hemostatis (ISTH) major bleeding.

Aim:
This study is to investigate the efficacy and safety of asundexian in the prevention of stroke events in patients with atrial fibrillation.

How will it be done?
Focusing on Factor XIa inhibition, a team from UPM together with Bayer International are investigating a potential new class of antithrombotics.

RESEARCH WINNERS 2023

Congratulations!

ASSOC. PROF. DR. THAM CHAU LING

Department of Biomedical Sciences

For receiving an award

ICAN 2022/ 2023

Anugerah Kategori Industri

(Projek Jaringan Industri Terbaik- Pegawai Akademik)

'Production of Acetophenone- Enriched Standardized Leaves Extract of Melicope ptelefolia (ACE-MPETM) and Evaluation of Its Anti-allergic Inflammatory Properties''

RM240,000
Nexus Wise Sdn Bhd

Team members:

1. Prof. Dr. Daud Ahmad Israf Ali
2. Prof. Dr. Khozirah Shaari
3. Dato' Prof. Dr. Mohd Roslan Sulaiman
4. Dr. Siti Munirah Mohd Faudzi
5. Dr. Sazlina Kamaruzaman

Background:
Melicope ptelefolia is a well-known herb in a number of Asian countries including Malaysia. Over the past years, our research team had demonstrated that, 2,4,6-trihydroxy-3-geranylacetophenone (tHGA), an active acetophenone compound found in M. ptelefolia was able to alleviate allergic skin inflammation in mice by inhibiting mast cell activation. However, as tHGA is not found abundantly in M. ptelefolia, this has limited the development of M. ptelefolia as a potential nutraceutical for skin health. Our research team has successfully produced an acetophenone-rich M. ptelefolia leaves extract (ACE-MPE) standardized to its bioactive constituents (tHGA and its other derivatives) with in vitro and in vivo ameliorative properties on allergic skin diseases. The technology to produce ACE-MPE standardized extract from M. ptelefolia is currently under patent and the extract will be launched in September 2023 under the brand name of EczefoliaTM. Future works include clinical trial and oral toxicity study will be done by the funder, Nexus Wise Sdn Bhd.

Aim:
There is no nutraceutical ingredient made from M. ptelefolia available in the market yet, this project helps to fill the gap in the research to commercialization pipeline of this highly beneficial medicinal plant. This project leads to the production of EczefoliaTM as a nutraceutical ingredient for skin health.

How will it be done?
1. Extraction and standardization were done by using green ultrasonic-assisted extraction and enrichment.
2. in vitro model of mast cell degranulation
3. in vivo model of atopic dermatitis-like skin lesions
4. Metabolomics analysis

Research Outputs:
1. One PhD student
2. Publications
3. A patent on the production technology of EczefoliaTM and its use on skin allergic inflammation.
4. A nutraceutical ingredient for skin health which is ready to be launched to the local and international market in September 2023.

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Congratulations!

ASSOCIATE PROFESSOR DR. CHEAH PIKE SEE

Department of Human Anatomy

for being awarded

'COMSTECH-MSTF Joint Young Scientists Fellowship Program (YSFP)'

Funders:

Mustafa (pbuh) Science and Technology Foundation (MSTF) and COMSTECH (Organisation of Islamic Cooperation Standing Committee on Scientific and Technological Cooperation)

Aim:

To support talented youth with the cooperation of prestigious scientific institutes and reputable R&D centers, towards the capacity building and nurturing the young generation for the development of science, technology, and innovation in line with the values and needs of the Islamic society.

Activity

Fully funded short-term research network and attachment in selected Islamic country (Duration: 2023/ 2024)

&

UNESCO SKUM Grant (SKUM Contribution Grant - GSS)

for the project titled

"Brain Awareness for Malaysian 2023 Program (BAM2023)"

This prestigious grant has been bestowed by the Malaysia National Commission for UNESCO under the Ministry of Education Malaysia.

As the national reference point for UNESCO in Malaysia, SKUM plays a pivotal role in fostering the active engagement of government agencies and non-governmental organizations across Malaysia in implementing programs and activities aligned with UNESCO's areas of expertise and national priorities. One of our core objectives is to promote the Sustainable Development Goals (SDGs) outlined by UNESCO towards the year 2030. UNESCO is actively involved in implementing SDGs related to education, science, social sciences, communication, and culture.

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Best Student Poster Case Study Presentation
Name of recipient: **Kumuthini Karuppan** (3rd prize) (Year 4, Bachelor of Science in Dietetics with Honours)
Title: **Nutrition Management of Post-Extubation Dysphagia in an Elderly Post-Coronary Bypass Graft Surgery (CABG) Patient**
Supervisor: **Ms Foong Pui Hing (IJN)**

Best Student Poster Research Presentation
Name of recipient: **Hon Lip Hen** (1st prize) (Year 3, Bachelor of Science in Dietetics with Honours)
Title: **Prevalence of Malnutrition and Its Associated Factors Among Stroke Patients in Hospital Sultan Abdul Aziz Shah (HSAAS), UPM**
Supervisor: **Dr. Zuriati Ibrahim**

Best Student Oral Research Presentation
Name of recipient: **Chow Yu Fei** (1st prize) (Year 4, Bachelor of Science in Dietetics with Honours)
Title: **Factors Associated With Risk of Sarcopenia Among Hemodialysis Patients in Selected Dialysis Centers in Selangor**
Supervisor: **Prof. Dr. Chan Yoke Mun**

Postgraduate Best Thesis Award
Name of recipient: **Cordelia Lim Kheng May** (2nd prize) (Graduated 2022)
Title: **Assessing Protein Energy Wasting among Hemodialysis Patients using Bioelectrical Impedance Analysis-Derived Phase Angle at Selected Dialysis Centers in the Klang Valley Malaysia**
Supervisor: **Assoc. Prof. Dr. Zulfitri 'Azuan bin Mat Daud**
Co-supervisor: **Prof. Dr. Chan Yoke Mun**

Best Dietitian / Postgraduate Poster Research Presentation
Name of recipient: **Ng Wai Han** (2nd prize) (Master of Science - Clinical Nutrition)
Title: **Dietary Inflammatory Index and body composition of newly diagnosed breast cancer patients, a cross sectional study in a tertiary hospital**
Supervisor: **Dr. Zalina binti Abu Zaid**

Best Dietitian / Postgraduate Oral Research Presentation
Name of recipient: **Imliya Ibrahim** (1st prize) (Master of Science - Clinical Nutrition)
Title: **Beyond Nutrient Intakes: Integrative Analysis of Dietary Patterns to Elucidate the Unexplained Ramadan-Induced Nutritional Biochemical Alterations in Malaysian Hemodialysis Patients**
Supervisor: **Assoc. Prof. Dr. Zulfitri 'Azuan Mat Daud**

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RESEARCH WINNERS 2023

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12 &13 Jun 2023
Vertical Bangsar South

PREVALENCE OF MALNUTRITION AND ITS ASSOCIATED FACTORS AMONG STROKE PATIENTS IN HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS), UPM

Hon Lip Hen, Zuriati I.[1,2]
[1]*Department of Dietetics, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia,43400 Serdang, Selangor.*
[2]*Department of Dietetics, Hospital Sultan Abdul Aziz Shah, Persiaran MARDI-UPM, 43400 Serdang, Selangor.*

Objective: This cross-sectional study aimed to determine the prevalence of malnutrition and its associated factors among stroke patients in HSAAS, UPM.

Method: Data on socio-demographic characteristics, medical status, biochemical data, and nutritional management were retrieved from the medical records of the subjects and recorded in the data collection form. Anthropometry parameters (body fat percentage, skeletal muscle mass index [SMI], phase angle, …) were measured using InBody® S10. Functional status was measured in terms of handgrip strength using Jamar® hand dynamometer. Dietary inadequacy was determined through 24-hour dietary recall interviews. Dietary inadequacy is referred to energy intake of <70% of requirement. Malnutrition was assessed using the PG-SGA questionnaire. Associations were tested using Fisher exact test and Chi-square test of independence.

Results: 45 subjects age ranged from 20-89 years (53.3% male and 46. 7% female; 68.9% aged ≥60 and 31.1% aged 18-59) participated in this study. Most subjects had at least 2 underlying diseases (71.1%), with hypertension being the most common (75. 6%). Fasting lipid profile indicated poor results, with 51.2% having low HDL and 75.6% having high LDL. About 30.0% of the subjects were not referred to dietitian and more than half (55.6%) received exclusive tube feeding. The mean BMI was 25.30 ± 5.38 kg/m2. Majority (81.0%) of the subjects were having high body fat percentage, while 44.2% had low SMI. The mean phase angle was 4.94 ± 1.33°. Weak handgrip strength was observed in 73.3% of the subjects. Most subjects achieved dietary adequacy (66.7%), but the prevalence of malnutrition was 62.2%. No significant associations were found between socio-demographic characteristics, medical conditions, anthropometry parameters, biochemical data, functional status, nutritional status, and dietary inadequacy with malnutrition among stroke patients in HSAAS, UPM.

Conclusion: This high prevalence of malnutrition reported in this study underscores the urgent need for early malnutrition screening and dietary interventions during admission for all stroke patients.

Keywords: malnutrition, stroke patients

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12 &13 Jun 2023

Vertical Bangsar South

Prevalence of Malnutrition and its Associated Factors among Stroke Patients in Hospital Sultan Abdul Aziz Shah, UPM

Hon Lip Hen[1] and Zuriati Ibrahim[1,2]

[1]Department of Dietetics, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor.
[2]Department of Dietetics, Hospital Sultan Abdul Aziz Shah, Persiaran MARDI-UPM, 43400 Serdang, Selangor.

Introduction

- Malnutrition is often coexisted with in stroke patients although the associations remain poorly understood. Malnutrition may result from poor monitoring of nutritional status, prolonged inadequate dietary intake during hospitalization and increased nutritional requirements during recovery.
- There are limited studies conducted to study the malnutrition and its associated factors among stroke patients in Malaysia.
- Therefore, this cross-sectional study was conducted to determine the prevalence of malnutrition and its associated factors among stroke patients in Hospital Sultan Abdul Aziz Shah, UPM.

Methodology

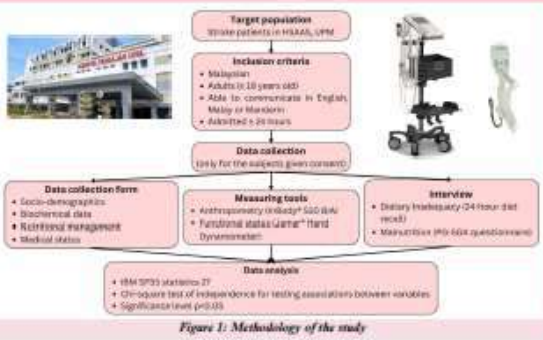
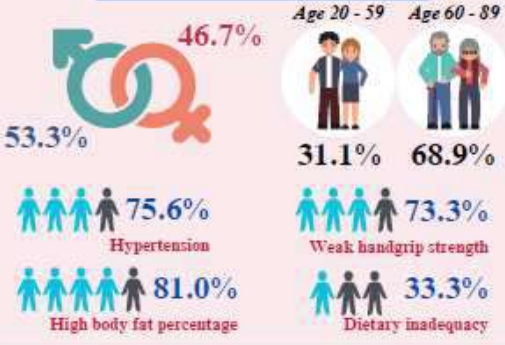


Figure 1: Methodology of the study

Results & Discussion

Total number of subjects (n=45)



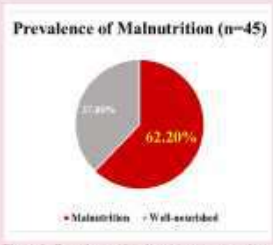


Figure 2: Prevalence of malnutrition among subjects

Figure 3: Body weight status & malnutrition

Figure 4: Phase angle & malnutrition

Figure 5: Referral to dietitian & malnutrition

- Significant associations were found between body weight status ($\chi 2 = 5.803$, $p = 0.016$), phase angle ($\chi 2 = 4.004$, $p = 0.044$), and referral to dietitian ($\chi 2 = 4.448$, $p = 0.035$) with malnutrition.
- Well-nourished subjects were mostly overweight or obese, while malnourished subjects tended to have a normal weight. This aligns with previous research indicating that overweight elderly individuals are more likely to be well-nourished compared to those with a normal weight [1].
- Most well-nourished subjects had a normal phase angle, whereas the majority of malnourished subjects had a low phase angle. This finding is consistent with a previous study that also reported an association between phase angle and malnutrition in patients with acute stroke [2].
- Referral to dietitian seemed to positively affect the nutritional status of the subjects. This may be because dietitian assessment and intervention is effective in improving dietary intake and quality for patients at risk of malnutrition [3].

Conclusion

- This high prevalence of malnutrition reported in this study underscores the urgent need for early malnutrition screening and dietary interventions during admission for all stroke patients.
- Having higher BMI and normal phase angle tends to have protective effect against malnutrition among stroke patients.
- Referral to dietitian tends to be a preventive and corrective approach for malnutrition among stroke patients. This highlights the important role of dietitian in implementing early dietary interventions in stroke patients.

Acknowledgement

- The author would like to express gratitude to the project supervisor, Dr Zuriati Ibrahim for all the guidance and motivation given in planning, conducting and completing the research.
- The author also would like to offer sincere appreciation to all the subjects who participate in this research.

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Bioelectrical Impedance Analysis Derived-Phase Angle as a Pragmatic Tool to Detect Protein Energy Wasting among Hemodialysis Patients in Malaysia

Cordelia Kheng May L[1], Jun Hao L[1], Imliya I[1], Yoke Mun C[1,4], Nor Fadhlina Z[2], Rosnawati Y[3] and Zulfitri Azuan MD[1,4*]

[1]Department of Dietetics, Universiti Putra Malaysia, [2]Department of Medicine, Universiti Putra Malaysia, [3]Department of Nephrology, Hospital Kuala Lumpur, [4]Research Center of Excellence, Nutrition and Non-Communicable Diseases, Universiti Putra Malaysia

INTRODUCTION

- **Protein energy wasting (PEW) (*define as per Figure 1*) is highly prevalent in patients with chronic kidney disease (CKD) and worsens as the disease progresses.**
- **PEW is implicated for premature death in CKD.**
- **Reference method recommended by the International Society of Renal Nutrition and Metabolism (*Figure 2*) to diagnose PEW is cumbersome in the clinical setting[1].**
- **The diagnosis of PEW is challenging and subjected to the following limitations:**
  - Time-consuming
  - Requires well-trained personnel (i.e., dietitian)
  - Possibility of incomplete information
  - Less practical in the clinical setting
- **Phase angle (PhA) appears as a rapid proxy to detect PEW among hemodialysis patients (HD) patients in other countries [2-4].**

Figure 1: Illustration on definition of PEW

Figure 2: Diagnostic criteria for PEW per ISRNM

OBJECTIVE

We propose the use of bio-electrical impedance (BIA) derived-phase angle (PhA) as a pragmatic tool by examining diagnostic test accuracy of PhA and establish an optimal cut-off point for PhA to detect PEW in HD patients.

METHODOLOGY

- Cross-sectional study
- Multicentre (n=9)
- Quota sampling (gender 1:1)
- Klang Valley
- Multi-ethnic
- 204 HD patients

Inclusion criteria
- Malaysian
- ≥ 18 years old
- Undergoing regular HD treatment (2x/week, ≥ 6 months)

Exclusion criteria
- Visual, hearing or speech impairment
- Cognitive impairment, frailty, severely ill
- Contraindications for BIA measurement
- Underwent surgical procedure (≤3 months)
- Involved in clinical trial

Study procedures and parameters

Statistical Analysis

No.	Research Hypothesis	Statistical Test
1.	PhA can significantly predict PEW in HD patients.	Logistic Regression
2.	The established population- and gender-specific PhA cut-offs can significantly detect PEW in HD patients.	Receiver Operating Characteristic Curve Analysis

RESULTS

1 Socio-demographics characteristics (n=152)

Ethnicity
Malay (55.3%)
Chinese (32.9%)
Indian (11.8)

Prevalence of PEW among HD patients (n=152)

About 1 in 5 (21.1%) HD patients have PEW

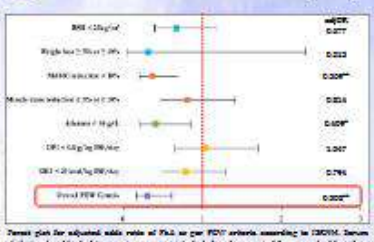
PhA according to PEW group in HD patients (n=152)

Group	PhA°	p
PEW (n=32)	3.71 ± 0.93	<0.001
Non-PEW (n=120)	4.42 ± 0.87	

Data was analysed using independent t-test.

Interpretation
- As expected, patients with PEW had a significantly lower PhA compared to their non-PEW counterparts.

2 Predictive Power of PhA for PEW Diagnosis (n=152)



Forest plot for adjusted odds ratio of PhA on per PEW criteria according to ISRNM. Serum albumin and body fat percentage were not included in the regressed frequency load less than five representative cases. *p<0.05, **p<0.001.

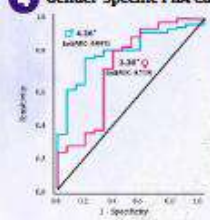
Interpretation
- PhA can predict 2 out of the 7 PEW sub-criteria (i.e., MAMC reduction >10% and serum albumin <38g/L)
- PhA is a significant (adjOR=0.302, p=0.001) independent predictor of PEW in HD patients.
- Patients with lower PhA have 3.2x higher odds to be diagnosed with PEW.

3 Diagnostic Accuracy of PhA to detect PEW in HD Patients (n=152)

	PhA Cut-Off (°)	adjAUC (>0.7)	Sensitivity (%)	Specificity (%)	Model quality (>0.5)	p
Overall (n = 152)	4.11	0.746	62.5	61.7	0.62	<0.001
Male (n = 91)	4.26	0.809	68.8	67.7	0.70	<0.001
Female (n = 71)	3.30	0.719	68.8	66.5	0.66	0.007

Abbreviations: PhA, phase angle; adjAUC, area under the curve adjusted for age, dialysis vintage, comorbidities, measurement quality, and overhydration. Data was analysed using ROC curve analysis.

4 Gender-Specific PhA Cut-Off to detect PEW in HD Patients (n=152)



Interpretation
- PhA cut-off for males (4.26°) was higher than that of females (3.30°).
- Males have higher proportion of muscle mass and lower body fat compared to females with the same BMI.[5]

IMPLICATION FOR PRACTICE

- **CONCLUSION:** Phase angle is a pragmatic and valid biomarker in the clinical setting to detect PEW among multi-ethnic Malaysian HD patients.
- **IMPLICATION FOR PRACTICE:** PhA cut-offs at 4.26° for males and 3.30° for females can be used by healthcare professionals as an early and rapid indicator for PEW diagnosis in multi-ethnic HD patients.

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5. Karastergiou et al., (2012), Biology of Sex Difference, 3(1):1-12

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Access to publication

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DIETARY INFLAMMATORY INDEX AND BODY COMPOSITION OF NEWLY DIAGNOSED BREAST CANCER PATIENTS, A CROSS SECTIONAL STUDY IN A TERTIARY HOSPITAL

Ng WH[1, 2], Zalina AZ[1], Barakatun-Nisak MY[1], Syafinaz AN[1]

[1]*Universiti Putra Malaysia*

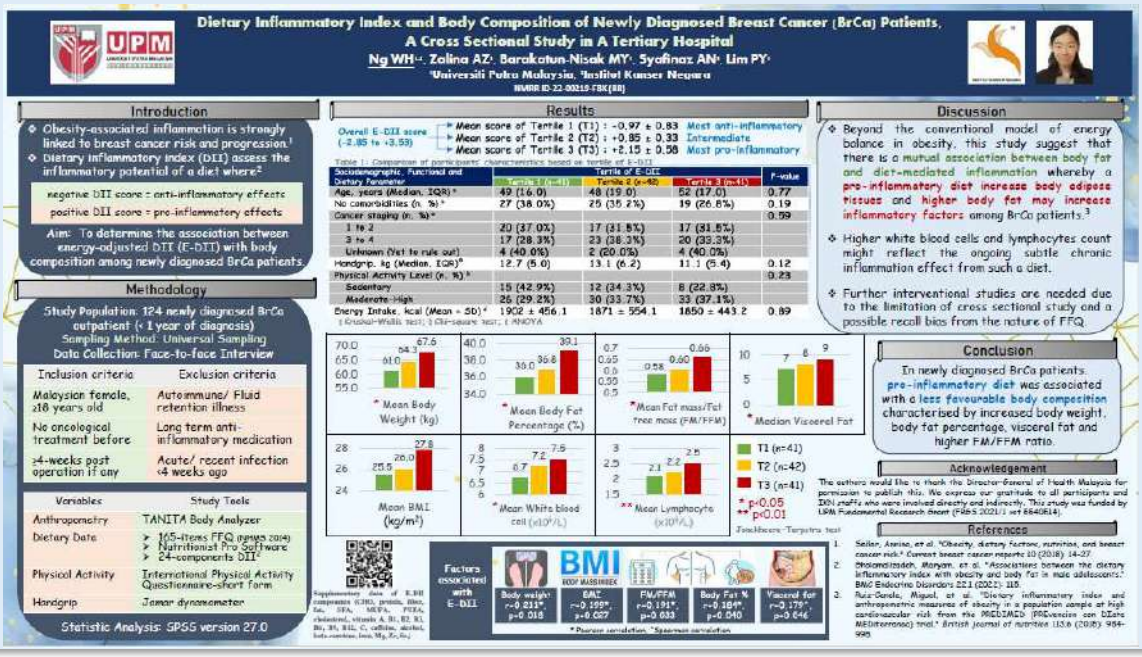
[2]*Institut Kanser Negara*

Objective: To determine the association between energy-adjusted dietary inflammatory index (E-DII) with body composition among newly diagnosed breast cancer patients.

Methodology: This was a cross sectional study involving 124 breast cancer patients from a tertiary medical centre in Peninsular Malaysia. All patients were within the first year of diagnosis and had yet to start on any oncological treatment. Body composition components including body weight, fat mass, fat-free mass and visceral fat were measured with TANITA body composition analyzer. E-DII scores were computed based on dietary intake assessed using an interviewer-administered, validated, 165-item food frequency questionnaire (FFQ). Physical activity level was determined using International Physical Activity Questionnaire – short form (IPAQ-sf) while handgrip strength was assessed with Jamar hand dynamometer. Biochemical profiles including albumin, hemoglobin and white blood cell components were obtained.

Results and Discussion: The mean body weight, body fat percentage, fat mass/ fat-free mass ratio (FM/FFM) and visceral fat increased as E-DII scores increased (p for trend < 0.05), with significant associations between E-DII and these body composition parameters (p< 0.05). As E-DII tertile increased from the lowest to the most pro-inflammatory tertile, the mean value for biochemical results also increased for white blood cells (p for trend < 0.05) and lymphocyte count (p for trend <0.01). However, handgrip strength did not show any significant difference across the E-DII tertiles.

Conclusion: In conclusion, pro-inflammatory diet was associated with a less favourable body composition characterised by increased body weight, body fat percentage and higher FM/FFM ratio in newly diagnosed breast cancer patients. Higher white blood cells and lymphocytes count might reflect the ongoing subtle chronic inflammation effect from such a diet.



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BEYOND NUTRIENT INTAKES: INTEGRATIVE ANALYSIS OF DIETARY PATTERNS TO ELUCIDATE THE UNEXPLAINED RAMADAN-INDUCED NUTRITIONAL BIOCHEMICAL ALTERATIONS IN MALAYSIAN HEMODIALYSIS PATIENTS

Ibrahim I[1], Lim JH[1], Adanan NIH[2], Lim CKM[1], Appannah G[3], Adnan WAHWM[4], Zakaria NF[5], Lim CTS[5], Yahya R[6], Gafor AHA[7], Karupaiah T[8], Daud ZAM[1]

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[3] *Department of Nutrition, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia*
[4] *Department of Medicine, Faculty of Medicine, University Malaya Medical Centre, Kuala Lumpur, Malaysia*
[5] *Department of Medicine, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia*
[6] *Department of Nephrology, Hospital Kuala Lumpur*
[7] *Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia*
[8] *School of BioSciences, Taylor's University*

Objective:
Significant nutritional biochemical changes during Ramadan pose potential life-threatening complications for hemodialysis (HD) patients. Traditional assessments of nutrient intakes fail to adequately explain these changes, leaving healthcare professionals without clear and specific dietary advice. Thus, this study aims to explain the nutritional biochemical alteration in Malaysians HD patients during Ramadan using dietary pattern approach.

Methodology:
A 6-week, multicenter, prospective longitudinal study was conducted among 102 Malaysian Muslim HD patients who planned to fast during Ramadan. Nutritional biochemical parameters, such as serum phosphate, potassium, and albumin were measured at two timepoints: two weeks prior (V0) and during the fourth week of Ramadan (V1). Dietary patterns were derived from 3-day diet records collected during V1 using both principal component analysis (PCA) and reduced rank regression (RRR). Mixed-model ANOVA was used to evaluate the impact of different dietary patterns on Ramadan-induced nutritional biochemical changes.

Results and Discussions:
PCA identified four distinct dietary patterns: "Home-Balance" (HB), "Ramadan High-Protein" (RHP), "Carbohydrate-based" (CB), and "Ramadan-Traditional"(RT). Meanwhile, RRR yielded one dietary pattern "Ramadan-Modern" (RM). Significant interactions of serum phosphate were found in RHP ($p=0.020$) and RM patterns ($p=0.004$). High adherence to RHP and RM patterns led to increased serum phosphate during Ramadan while low adherence resulted in reductions. RM pattern showed a significant interaction ($p<0.001$) for serum potassium with high adherence demonstrated increasing trend. Besides, HB pattern had a significant interaction ($p=0.035$) with serum albumin, with the lowest adherence experienced a greater reduction during Ramadan. Significant reductions of serum phosphate and albumin during Ramadan were observed in CB and RT patterns with no significant interaction was found between tertiles.

Conclusion: Dietary pattern rich in Ramadan finger food, poultry & egg, processed meat & fast food, fruits, and dried dates leads to adverse nutritional biochemical alterations during Ramadan. A Ramadan-specific dietary guideline is essential to promote healthier food choices among HD patients.

Congratulations!

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THE 38TH NUTRITION SOCIETY OF MALAYSIA (NSM) ANNUAL SCIENTIFIC CONFERENCE

4 & 5 July 2023
Swiss Garden Hotel Bukit Bintang, Kuala Lumpur

Best MSc Thesis Prize
Name of student: **Nor Syaza Sofia Binti Ahmad**
Title: **Psychological distress as mediator in the relationship between food insecurity and academic performance among undergraduate students in UPM.**
Supervisors: **Prof. Dr. Norhasmah Sulaiman; Prof. Dr. Mohamad Fazli Sabri**

Best BSc Thesis Prize
Name of student: **Ng Jia Hui**
Title: **Assessment of food security, dietary diversity and malnutrition in young children aged 2 to 6 years old from B40 families in Seremban.**
Supervisor: **Associate Professor Dr. Gan Wan Ying**

2nd Prize of NSM Young Researchers' Symposium
Name of student: **Miow Yee Xuen**
Title of oral presentation: **Development of local food-based dietary recommendations using linear programming approach for urban poor undernourished children aged 48 to 71 months old in Seremban, Malaysia.**
Supervisors: **Associate Professor Dr. Gan Wan Ying; Associate Professor Dr. Geeta Appannah; Associate Professor Dr. Siti Nur 'Asyura Adznam; Dr Lim Poh Ying**

3rd Prize of NSM Poster Competition Prize 2023
Name of student: **Wong Sze Shi**
Title of poster: **Changes in lifestyle and psychological health of young adults during and after the COVID-19 lockdown in Malaysia: A longitudinal study.**
Supervisor: **Associate Professor Dr. Gan Wan Ying**

Consolation Prize of NSM Poster Competition Prize 2023
Name of student: **Tan Chee Yee**
Title of poster: **Prebiotics potential of banana peel on the growth of Lactobacillus spp.**
Supervisor: **Dr. Mohd Redzwan Sabran**

Congratulations!

RESEARCH WINNERS 2023

THE 38TH NUTRITION SOCIETY OF MALAYSIA (NSM) ANNUAL SCIENTIFIC CONFERENCE

4 & 5 July 2023
Swiss Garden Hotel Bukit Bintang, Kuala Lumpur

38th Scientific Conference

ASSESSMENT OF FOOD SECURITY, DIETARY DIVERSITY AND MALNUTRITION IN YOUNG CHILDREN AGED 2 TO 6 YEARS OLD FROM B40 FAMILIES IN SEREMBAN

Ng Jia Hui and Gan Wan Ying
Department of Nutrition, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

ABSTRACT

Providing children with adequate nutrition during the early years of life is crucial for their physical growth and development. However, food insecurity and malnutrition remain significant challenges in low-income households. Dietary diversity is an essential indicator in assessing the adequacy of nutrients consumption from daily diet and it is influenced by various factors. Despite this, little is known about dietary diversity among young children aged 2 to 6 years old in Malaysia. Therefore, this cross-sectional study aimed to examine the determinants of dietary diversity and its association with growth status among young children aged 2 to 6 years old from B40 families in Seremban. A total of 245 children (46.9% boys and 53.1% girls) from 10 randomly selected Taska KEMAS and 30 randomly selected Tabika KEMAS in Seremban participated in this study. The mean age of the children was 56.17 ± 12.78 months. A mother's self-administered questionnaire was used to obtain information on socio-demographic background and food security status. Anthropometric measurements including weight and height were measured by the researcher following standard procedures. A 3-day 24-hour dietary recall was obtained through phone call interviews to evaluate dietary diversity and nutrient intake of the children. Results showed that 53.9% of the respondents were food insecure. Besides, a high prevalence of underweight (23.3%), stunting (29.4%) and wasting (23.3%) were reported among the children. The prevalence of overweight and obesity among children was 4.5% and 1.2%, respectively. The mean dietary diversity score (DDS) of children was 6.34 ± 0.64, out of a possible score of 9. Majority of the children fell in the middle tertile of DDS (78.8%), while 20.0% were in the lowest tertile and 1.2% in the highest tertile. Bivariate results revealed that mother's age (r=-0.142, p=0.027) and monthly household income (F=2.983, p=0.029) were significantly associated with DDS. DDS was further found to be significantly correlated with HAZ of children (r=-0.142, p=0.027). However, no significant associations were found between food security and DDS, as well as DDS with WAZ, WHZ and BAZ (p>0.05). In conclusion, this study highlights the high prevalence of undernutrition and food insecurity among young children aged 2 to 6 years old from B40 families. Findings suggested that high DDS was prone to protect children from being stunted. Promoting dietary diversity among young children should be a priority for policymakers and interventions in kindergartens to address the burden of childhood malnutrition.

Congratulations!

RESEARCH WINNERS 2023

THE 38TH NUTRITION SOCIETY OF MALAYSIA (NSM) ANNUAL SCIENTIFIC CONFERENCE

4 & 5 July 2023
Swiss Garden Hotel Bukit Bintang, Kuala Lumpur

38th Scientific Conference

DEVELOPMENT OF LOCAL FOOD-BASED DIETARY RECOMMENDATIONS USING LINEAR PROGRAMMING APPROACH FOR URBAN POOR UNDERNOURISHED CHILDREN AGED 48 TO 71 MONTHS OLD IN SEREMBAN, MALAYSIA

***Miow Yee Xuen*[1], *Gan Wan Ying*[1], *Umi Fahmida*[2], *Lim Poh Ying*[3], *Geeta Appannah*[1] *and Siti Nur' Asyura Adznam*[4]**

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[2]*South East Asian Ministers of Education Organization Regional Center for Food and Nutrition (SEAMEO RECFON), University of Indonesia*
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[4]*Department of Dietetics, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia*

It could be challenging to meet the nutritional needs of young children while maintaining their intake of local and culturally appropriate foods. Using linear programming (LP) approach to optimize their diet can be an effective strategy to include local and culturally acceptable foods. This cross-sectional study aimed to develop affordable and realistic food-based dietary recommendations (FBR) to improve dietary adequacy of urban poor undernourished children aged 48 to 71 months old from low-income households in Seremban district, Malaysia. Dietary intake of 83 undernourished children was assessed using a non-consecutive 3-day 24-hour dietary recall. FBR were developed by LP approach using WHO Optifood software. Comparing to the Recommended Nutrients Intakes (RNI) of Malaysia, niacin (93%), folate (30%), calcium (30%), and zinc (55%) were not achieved by most of the children. Folate was considered as an absolute problem nutrient whereas adequacy levels of vitamins A, B6, B12, C, calcium, iron, and zinc were difficult to be achieved even when the diet was optimized. The identified top five locally available nutrient-dense foods that would fill these nutrient gaps were chocolate malted milk, full cream milk, chicken egg, mustard greens, and cauliflower. The recommended FBR were 3 servings of grains, 1 serving of fruits, 2 servings of vegetables (of which included 1 serving of vitamin C-rich vegetables), 2 servings of meat, fish and eggs (of which included 1 serving of eggs), 1 serving of legumes, nuts and seeds, and 2 servings of fluid milk every day. Findings indicate that there is a need to implement a healthy, balanced, affordable and culturally acceptable FBR for undernourished children from low-income households in order to fill the identified nutrient gaps.

Congratulations!

RESEARCH WINNERS 2023

The 38th Nutrition Society of Malaysia (NSM)
Annual Scientific Conference
4 & 5 July 2023
Swiss Garden Hotel Bukit Bintang, Kuala Lumpur

CHANGES IN LIFESTYLE AND PSYCHOLOGICAL HEALTH OF YOUNG ADULTS DURING AND AFTER THE COVID-19 LOCKDOWN IN MALAYSIA: A LONGITUDINAL STUDY

Sze Shi Wong and Wan Ying Gan
Department of Nutrition, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

INTRODUCTION

- Malaysia has been subjected to a series of lockdown since COVID-19 pandemic. Lockdown known as Movement Control Order (MCO) starting on 18 March, 2020 (Elengoe, 2020).
- The COVID-19 pandemic has impacted weight changes in young adults' population.
- Lockdown has caused changes in lifestyle behaviors (Chin et al., 2022; Kwan et al., 2021) and psychological health (Salari et al., 2020).
- There is a lack of longitudinal research on the changes in lifestyles and psychological health of young adults during and after the COVID-19 lockdowns.

Objectives

1. To examine the changes in:
   - personal factors (household income level, current living arrangement, and food security)
   - lifestyle factors (physical activity, chronotype, night eating syndrome, internet addiction, social media use, sleep quality and meal consumption)
   - psychological factors (depression, anxiety, stress and body image dissatisfaction)
   - body weight and BMI among young adults

during and after the COVID-19 pandemic lockdowns.

METHODOLOGY

Study Design: Prospective cohort study

Study Location: Malaysia

Data collection: 2 time points:
- during lockdown (Jul to Aug 2021)
- after lockdown (Jul to Oct 2022)

Sampling Design: Convenience sampling

In this study..

- n=230 respondents
- 17.8% males and 82.2% females
- Mean age: 22.55 ± 1.53 years old
- 63.1% Chinese, 29.1% Malay, 3.5% Indian, and 4.3% others

Variable	Instrument
BMI and body weight changes	Self-reported body weight and height
Sociodemographic data	Self-administered questionnaire
Food security status	U.S. Adult Food Security Survey Module (AFSSM)
Physical activity	International Physical Activity Questionnaire (short form) (IPAQ-SF)
Human chronotype	Morningness and Eveningness Questionnaire (MEQ)
Night eating syndrome	Night Eating Questionnaire (NEQ)
Internet addiction level	Internet Addiction Test (IAT)
Social media usage	Social Media Use
Meal skipping	Eating Behaviours Questionnaire (EBQ)
Sleep quality	Pittsburgh Sleep Quality Index (PSQI)
Depression, anxiety, stress	Depression Anxiety Stress Scale (DASS-21)
Body image perception	Contour Drawing Rating Scale (CDRS)

Statistical Analysis

Paired-samples t-test | McNemar & McNemar-Bowker tests

IBM SPSS Statistics 26

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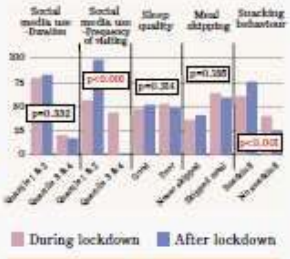
Shaun, M. A., Ahmed, A., Sarah, M., Nurafiqah, A., Alkaabba, O., Mahmoud, ... & Wan Ying Gan (2021). Effects of COVID-19 home confinement on eating behaviour and physical activity in Bangladesh and Malaysia. Current Psychology, 1-13. https://doi.org/10.1007/s12144-022-03621-1

RESULTS & DISCUSSION

1 Changes In Personal, Lifestyle, Psychological factors

During lockdown | After lockdown



During lockdown | After lockdown

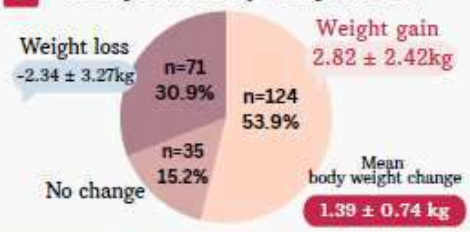
During lockdown | After lockdown

Variables	M ± SD		t-value	p-value
	During lockdowns	After lockdowns		
Depression scores	5.63 ± 5.27	4.90 ± 5.13	2.70	0.008
Anxiety scores	5.41 ± 4.69	4.34 ± 4.45	3.65	<0.001
Stress scores	6.31 ± 5.10	5.19 ± 4.98	3.40	0.001
Body size discrepancy scores	-1.06 ± 1.61	-1.06 ± 1.61	-0.23	0.819

Variables	M ± SD		t-value	p-value
	During lockdowns	After lockdowns		
MET-min/week	872.00 (386.63-2 044.50)	1386.00 (924.00-2880.00)	-4.76	<0.001
Chronotype scores	48.33 ± 8.73	50.17 ± 8.09	-4.61	<0.001
NES scores	9.31 ± 3.56	12.94 ± 4.53	-10.45	<0.001
IAT scores	43.39 ± 16.93	39.28 ± 16.61	3.59	<0.001
Duration of using	351.30 ± 196.39	298.51 ± 167.57	0.92	0.356
Frequency of visiting	131.73 ± 52.61	132.46 ± 63.52	0.05	0.957
PSQI score	5.90 ± 2.86	5.64 ± 2.61	1.53	0.128

- More respondents were in B40 groups and lived in college dormitories after lockdown. The prevalence of food insecurity increased after lockdown ($p<0.05$).
- Food inflation causes pressure on low-income families' disposable income, making them vulnerable to food insecurity (World Bank, 2022).
- There were significant increased in physical activity levels, morning chronotypes, night eating scores, and snacking behavior but decreased in internet addiction, frequency of visiting social media, depression, anxiety and stress scores ($p<0.05$) after lockdown.
- No significant changes in sleep quality, duration of social media use, main meals skipping and body image perception among respondents ($p>0.05$).
- The removal of movement restrictions, including the reopening of eateries, convenience stores, and sports and fitness centers, was primarily responsible for the significant difference between lockdowns, allowing people to go outside, engage in physical activity and socialize (Shaun et al., 2021).

2 Changes In Body Weight & BMI



Variables	M ± SD / n (%)		t -value	p-value
	During lockdowns	After lockdowns		
Body weight (kg)	54.38 ± 10.38	55.18 ± 10.72	-3.52	0.001
BMI (kg/m^2)	21.22 ± 3.89	21.54 ± 4.05	-3.52	0.001
Underweight	56 (24.3)	48 (20.9)		
Normal Weight	139 (60.5)	143 (62.2)		
Overweight & obese	35 (15.2)	39 (16.9)		

- The mean body weight and BMI of the respondents increased significantly during and after lockdowns ($p=0.001$).

- 53.9% gained weight, with an average weight gain of 2.82±2.42 kg.

- 30.9% lost weight, with an average weight loss of 2.34±3.27 kg.

CONCLUSION

- This study highlights the significant impact of COVID-19 on weight change as well as lifestyle and psychological well-being of young adults during and after the COVID-19 pandemic lockdowns.
  - significant increased in body weight and BMI
  - significantly increased in food insecurity, physical activity levels, morning chronotype, night eating scores and snacking behavior but decreased in monthly household income, internet addiction, frequency of visiting social media platforms, depression, anxiety and stress scores
- Increased investment in programs and interventions should prioritize the promotion of healthy eating, adoption of a healthy lifestyle, enhancement of psychological well-being, and implementation of weight management strategies.

RESEARCH ACTIVITIES REPORT CRU ASSOCIATE MEMBERS (CRAMS) AND CLINICIAN SCIENTIST COTERIE (CSC) FOR SERIE 5/2023

SHARING FROM CRAMS AND CSC MEMBERS! 5/2023

By Salwana Ahmad

CRAMs Online Meeting was held every 2 months among CRAMs Members, Clinician Scientist Coterie (CSC) Members, and staff among Hospital Sultan Abdul Aziz Shah (HSAAS), 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 striving to keep moving forward. During the session, the members will have to present their research activities report comprising 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 PEADIATRIC

CRAMs Member:
Dr. Putri Binti Yubbu

Background:

The Department of Paediatrics was established on 1st June 2006 for clinical teaching and curriculum for year 1 to year 5 Medical Students. Apart from clinical services, this department is also responsible for producing postgraduates from the Master of Medicine (Paediatrics) course to trained qualified graduates as general pediatricians. This program offers full-time course work that aligns with high national standards to produce highly qualified graduates Apart from the teaching activities mentioned above, the excellence in research and professional consultation is also taken part.

Department Specialist and Lecturers:

The department consists of 17 Specialists in total:

- 13 Academic members- 8 active academic staff
- 4 Lecturers on subspecialty training, 1 ongoing PhD.

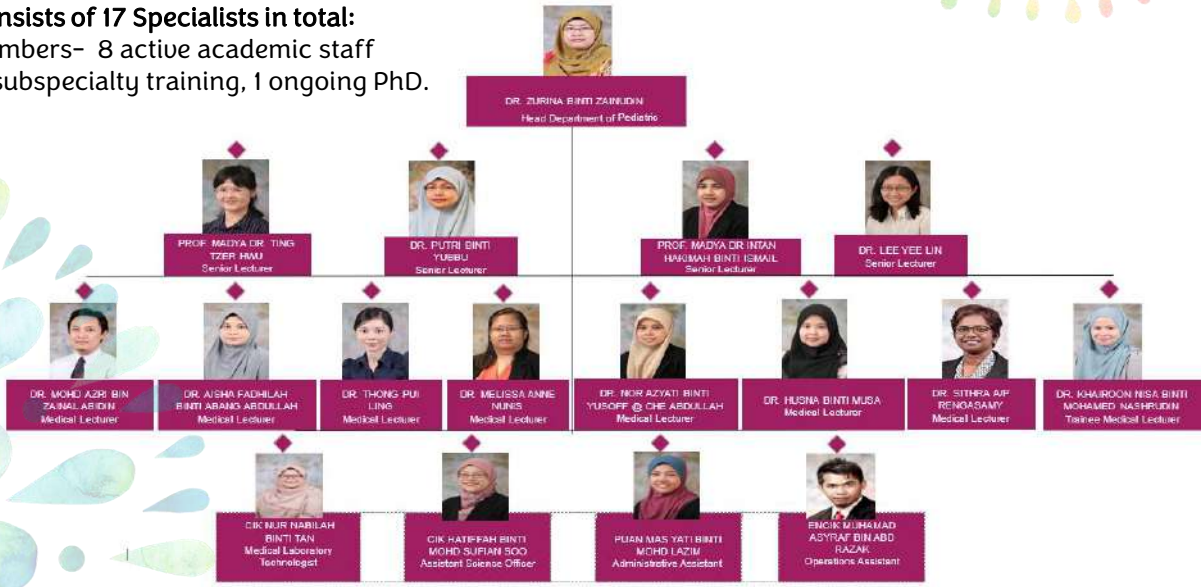


Figure 1 Organization Chart for the Department of Paediatric

Establishment of Clinical Immunology, Dermatology, & Allergy (IDEAL) Research Center

1. Advanced Medical Research in Allergology and Clinical Immunology (AMRAC) is a center for improving the diagnosis and treatment of PID and allergic diseases through clinical activities, research education, and advocacy.
2. It has been well known as Malaysia's referral center for pediatric allergy (food) and clinical immunology (primarily PID).
3. In HSAAS, Allergy and Clinical Immunology Centre (AMRAC):
   - Provides advanced and comprehensive care for allergy and PID patients
   - Consist 2 interrelated units to cater to patients and research needs:
     - Allergy & Clinical Immunology Specialist (ACIS) Centre
     - Primary Immunodeficiency and Allergy Diagnostic & Research Laboratory (PEARL)

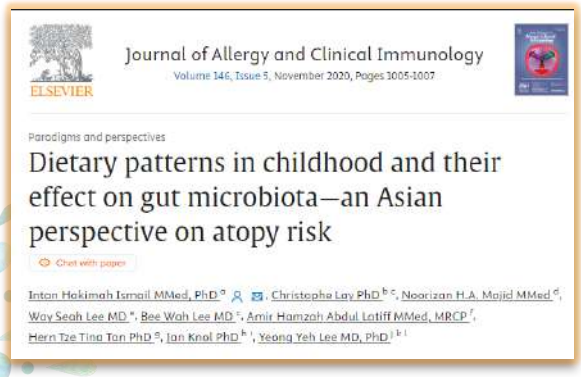
REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

Research Highlights and Achievements:

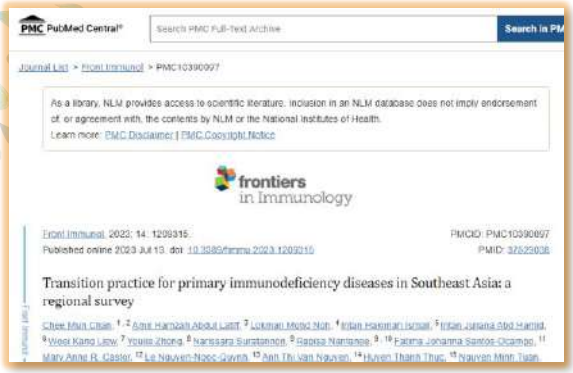
Year	Number of Publication/Year
2020	15
2021	10
2022	12
2023	10 (Ongoing)

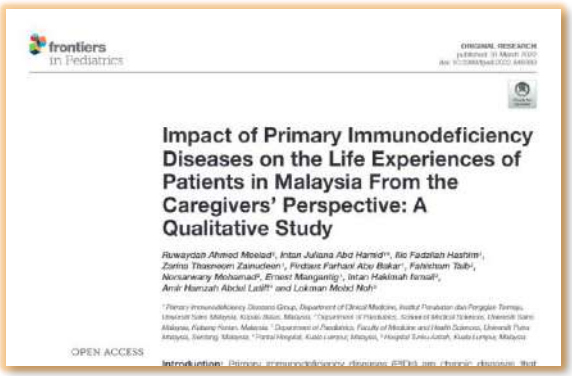
Table 1 Number of publications based on past research projects.

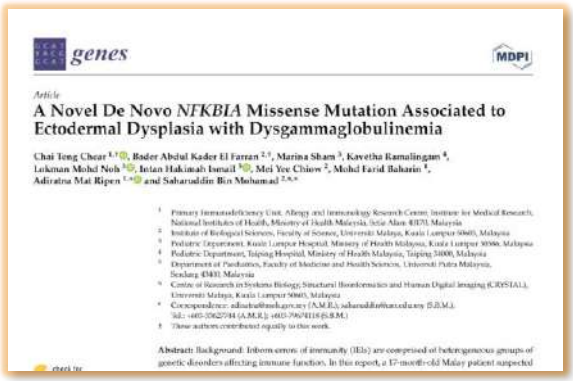
Publications Highlight: Top 10% and Q1 and Q2 Journal (Allergy and Immunology)


Journal of Allergy and Clinical Immunology
Volume 146, Issue 5, November 2020, Pages 1005-1007
Paradigms and perspectives
Dietary patterns in childhood and their effect on gut microbiota—an Asian perspective on atopy risk

frontiers in Immunology
Targeted Gene Sanger Sequencing Should Remain the First-Tier Genetic Test for Children Suspected to Have the Five Common X-Linked Inborn Errors of Immunity


PMC PubMed Central
frontiers in Immunology
Transition practice for primary immunodeficiency diseases in Southeast Asia: a regional survey


frontiers in Pediatrics
Impact of Primary Immunodeficiency Diseases on the Life Experiences of Patients in Malaysia From the Caregivers' Perspective: A Qualitative Study


genes
MDPI
A Novel De Novo *NFKBIA* Missense Mutation Associated to Ectodermal Dysplasia with Dysgammaglobulinemia

frontiers in Cellular and Infection Microbiology
Lactobacillus for the treatment and prevention of atopic dermatitis: Clinical and experimental evidence

frontiers | Frontiers in Immunology
Editorial: Creating Awareness for Primary Immunodeficiencies in the Southeast and East Asia Regions

J Asthma Allergy. 2022; 15: 983–1003.
Pharmacological Management of Allergic Rhinitis: A Consensus Statement from the Malaysian Society of Allergy and Immunology

Publications Highlight: Top 10% and Q1 Journal (Paediatric Cardiology)

The International Journal of Cardiovascular Imaging (2022) 38:1505–1516
https://doi.org/10.1007/s10554-022-02587-y

ORIGINAL PAPER

Peak apical recoil rate is a simplified index of left ventricular untwist: validation and application for assessment of diastolic function in children

Putri Yubbu[1,2] · Hunter Kauffman[1] · Renzo Calderon-Anyosa[1] · Andrea E. Montero[1] · Tomoyuki Sato[1] · Daisuke Matsubara[1] · Anirban Banerjee[1]

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Abstract
The use of untwisting rate as a novel index of LV diastolic function in clinical practice has been limited due to its tedious and time-consuming analysis. Therefore, we simplify the untwist measurement by only measuring the LV apex's recoil rate and validating and applying peak apical recoil rate (PARR) as an index of diastolic dysfunction (DD) in pediatric subjects during increased and decreased lusitropic states. We recruited 153 healthy subjects (mean age 13.8 ± 2.9 years), of whom 48 performed straight leg raising exercise and an additional 46 patients (mean 8.4 ± 5.6 years) with documented pulmonary capillary wedge pressures (PCWP) (validation cohort). In addition, we studied 16 dilated cardiomyopathy patients (mean age 9.5 ± 6.3 years) (application cohort). PARR and isovolumic relaxation time (IVRT) were compared to PCWP. Both PARR and PARR normalized by heart rate (nPARR) were excellent in detecting patients with PCWP ≥ 12 mmHg and greatly superior to IVRT in this respect (AUC: 0.98, 95% CI [0.96, 1.0] vs. AUC: 0.7 95%CI [0.54,0.86]). In DCM patients, PARR and nPARR were greatly decreased compared to controls (− 38.6 ± 18.6%/s vs − 63.1 ± 16.3°/s, p < 0.001) and (− 0.43 ± 0.20°/

Journal of the American College of Cardiology
Volume 76, Issue 17, 27 October 2020, Pages 1947-1961

Original Investigation

Echocardiographic Findings in Pediatric Multisystem Inflammatory Syndrome Associated With COVID-19 in the United States

Daisuke Matsubara MD, PhD, Hunter L. Kauffman BS, Yan Wang RDMS, Renzo Calderon-Anyosa MD, MSc, Sumekala Nadaraj MD, Matthew D. Elias MD, Travus J. White MD, Deborah L. Torowicz CRNP, Putri Yubbu MBBS, Therese M. Giglia MD, Alexa N. Hagarty MD, Joseph W. Rossano MD, Michael D. Quartermain MD, Anirban Banerjee MD

Cardiomyopathies

Left Ventricular Rotational Mechanics in Children After Heart Transplantation

Hythem M. Nawaytou, MBBCh; Putri Yubbu, MD; Andrea E. Montero, MD; Deipanjan Nandi, MD; Matthew J. O'Connor, MD; Robert E. Shaddy, MD; Anirban Banerjee, MD

Background—Left ventricular (LV) dysfunction after orthotopic heart transplantation (OHT) is multifactorial and can be an indicator of graft rejection or coronary artery vasculopathy. Analysis of rotational mechanics may help in the early diagnosis of ventricular dysfunction. Studies describing the left ventricular rotational strain in children after OHT are lacking. It is important to establish the baseline rotational mechanics in pediatric OHT to pursue further studies in this population.

Methods and Results—Rotational strain measured by speckle tracking was compared in 32 children after OHT, with no evidence of active rejection or coronary artery vasculopathy with 35 age-matched normal controls. Twelve OHT patients and 13 controls underwent moderate exercise with pre- and postexercise echocardiography. Torsion, slope of the systolic limb of the torsion–radial displacement loop, and the untwist rate were significantly higher in OHT patients (torsion: median 2.7°/cm [Q1–Q3, 2.3–3.2] versus 2.3°/cm [Q1–Q3, 1.9–2.7]; *P*=0.03, torsion–radial displacement loop: 2.7°/mm [Q1–Q3, 2.1–3.6] versus 2.0°/mm [Q1–Q3, 1.6–2.7]; *P*=0.008, indexed peak untwist rate: −21.6°/s/cm [Q1–Q3, −24.3 to −15.7] versus −17.1°/s/cm [Q1–Q3, −19.6 to −13.3]; *P*=0.01). Contrary to controls, OHT recipients were unable to increase torsion with exercise (OHT: 2.8°/cm [2.7–3.2] versus 3°/cm [2.4–3.5]; *P*=0.81, controls: 2.2°/cm [2–2.6] versus 3°/cm [2.4–3.7]; *P*=0.01, pre and post exercise, respectively). The systolic slope of the torsion–radial displacement loop relationship decreased with exercise in most OHT patients.

Conclusions—Baseline rotational strain in OHT patients is higher than normal with a blunted response to exercise. The slope

Journal of the American Society of Echocardiography
Volume 31, Issue 8, August 2018, Pages 951-961

Clinical Investigations
Pediatric Cardiomyopathies

A Preliminary Study of Left Ventricular Rotational Mechanics in Children with Noncompaction Cardiomyopathy: Do They Influence Ventricular Function?

Hythem M. Nawaytou MBBCH [a b], Andrea E. Montero MD [a], Putri Yubbu MD [a], Renzo J.C. Calderón-Anyosa MD [a], Tomoyuki Sato MD [a], Matthew J. O'Connor MD [a], Kelley D. Miller CRNP [a], Philip C. Ursell MD [c], Julien I.E. Hoffman MD [b], Anirban Banerjee MD, FACC [a]

The International Journal of Cardiovascular Imaging
https://doi.org/10.1007/s10554-018-1367-4

ORIGINAL PAPER

Diagnostic value of myocardial deformation pattern in children with noncompaction cardiomyopathy

Putri Yubbu[1,2] · Hythem M. Nawaytou[1,3] · Renzo Calderon-Anyosa[1] · Anirban Banerjee[1]

Received: 16 February 2018 / Accepted: 14 May 2018
© Springer Science+Business Media B.V., part of Springer Nature 2018

Abstract
The current echocardiographic diagnostic criteria for noncompaction cardiomyopathy (NCC) have variable sensitivity and low specificity. Moreover, there are limited data on the use of myocardial deformation imaging for early detection of myocardial dysfunction in children with NCC. We describe left ventricular (LV) deformation patterns in children with NCC, with the goal of identifying a potential diagnostic pattern. We prospectively enrolled 30 children with NCC (47% male; mean age 7.2 years) and 30 age- and gender-matched controls. Extent and severity of non compaction in each segment were evaluated in LV 16-segment model. Regional (base, mid and apex) and segmental (16 segments) longitudinal strain (LS), circumferential strain (CS) and radial strain (RS) were measured using speckle tracking echocardiography. In all patients with NCC, regional and segmental CS and RS at the apex were significantly decreased compared to controls (CS apex:

Publications Without Research Grant

Progress in Pediatric Cardiology
Contents lists available at ScienceDirect
Progress in Pediatric Cardiology
journal homepage: www.elsevier.com/locate/ppedcard

Review

Vascular compression of the airways: Issues on management in children with congenital heart disease

Putri Yubbu[a,*], Navin Kumar Devaraj[b], Dg. Zuraini Sahadan[c], Haifa Abdul Latiff[b]

ARTICLE INFO

ABSTRACT

Cardiology in the Young
cambridge.org/cty

Original Article

Cardiovascular causes of tracheobronchial compression: a decade experience in a Paediatric Congenital Heart Centre

Putri Yubbu[1], Haifa Abdul Latiff[2], Husna Musa[1], Navin Kumar Devaraj[3], Nurul Adha Mohd Razif[3], Sivakumar Sivalingam[4] and Hasri Samion[1]

Abstract
Background: Vascular compression of the airway often complicates CHD management. This study evaluated the use of CT in determining cardiovascular causes, clinical manifestations, and outcome of tracheobronchial compression among children with CHD. *Methods:* A retrospective review of clinical records of all patients with CT scan evidence of tracheobronchial compression from January 2007 to December 2017 at National Heart Institute. Cardiovascular causes of tracheobronchial compression were divided into three groups; group I: vascular ring/pulmonary artery sling, II: abnormally enlarged or malposition cardiovascular structure due to CHD, III: post-CHD surgery. *Results:* Vascular tracheobronchial compression was found in 81 out of 810 (10%) patients who underwent CT scan. Group I lesions were the leading causes of vascular tracheobronchial compression (55.5%), followed by group II (34.6%) and group III (9.9%). The median age of diagnosis in groups I, II, and III were 16.8 months, 3 months, and 15.6 months, respectively. Half of group I patients are manifested with stridor

Publications Highlight: Top 10% and Q1 Journal (Paediatric Endocrineology)

CASE REPORT

Nutritional Rickets in Three Toddlers during Covid-19 Pandemic Lockdown

Lee YL[a], Yusoff NA[b], Ting TH[a]
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[b]Department of Paediatrics, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

ABSTRACT

Nutritional rickets is a worldwide problem which has been increasingly reported globally. ...s aged 1-2 years presented in March to April 2021 with bony deformities ...year of national Covid-19 pandemic lockdown since March 2020. All three ...breastfed till presentation without formula milk supplementation. Weaning

Received: 4 June 2019 | Revised: 12 December 2019 | Accepted: 13 January 2020
DOI: 10.1111/pedi.12985

ORIGINAL ARTICLE

Molecular diagnosis of maturity-onset diabetes of the young in a cohort of Chinese children

Aijing Xu[1] | Yunting Lin[1] | Huiying Sheng[1] | Jing Cheng[1] | Huifen Mei[1] | Tzer Hwu Ting[2] | Chunhua Zeng[1] | Cuili Liang[1] | Wen Zhang[1] | Cuiling Li[1] | Xiuzhen Li[1] | Li Liu[1]

[1]Department of Genetics and Endocrinology, Guangzhou Women and Children's Medical Center, Guangzhou Medical University, Guangzhou, China
[2]Department of Paediatrics, Faculty of Medicine & Health Sciences, University Putra Malaysia, Serdang, Malaysia

Abstract
Objective: The purpose of this st... maturity-onset diabetes of the you... and estimate the frequency and d... southern China.

Journal of Paediatrics and Child Health
doi:10.1111/jpc.16405

ORIGINAL ARTICLE

Thyroid autoimmunity and autoimmune thyroid disease in Malaysian girls with Turner syndrome: An understudied population

Yee L Lee[1], Azriyanti A Zaini[2], Arini N Idris[3], Raja A Abdullah[4], Jeanne SL Wong[5,6], Joyce SS Hong[7], Suhaimi Hussain[8], Poi G Lim[3], Song H Lim[9], Noor SM Nor[10,11], Loo L Wu[12] and Muhammad Y Jalaludin[2]

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Tavana et al. Italian Journal of Pediatrics (2022) 48:193
https://doi.org/10.1186/s13052-022-01385-5

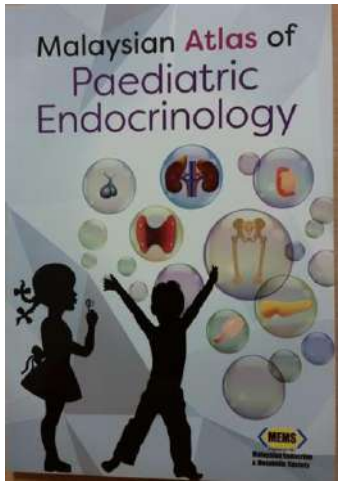
Italian Journal of Pediatrics

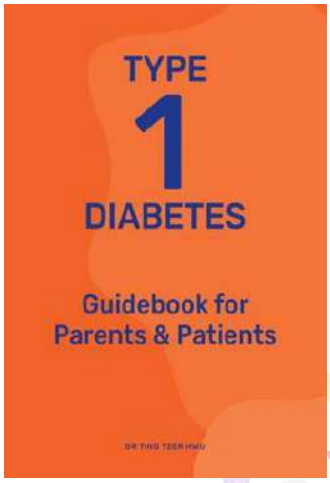
RESEARCH Open Access

Whole exome sequencing identifies two novel variants in *PHEX* and *DMP1* in Malaysian children with hypophosphatemic rickets

Nahid Tavana[1], Tzer Hwu Ting[2*], Kaitao Lai[3,4], Marina L. Kennerson[3,5] and Karuppiah Thilakavathy[1,6*]

Abstract
Background: Hypophosphatemic rickets (HR) is a genetic disease of phosphate wasting that is characterized by defective bone mineralization. The most common cause of the disease is mutations in the phosphate regulating gene with homologies to endopeptidases on the X chromosome (*PHEX*) gene. The aims of this study were to identify the gene variants responsible for HR in three cases of Malaysian origin from three independent families and to describe their clinical, biochemical, and radiological features.





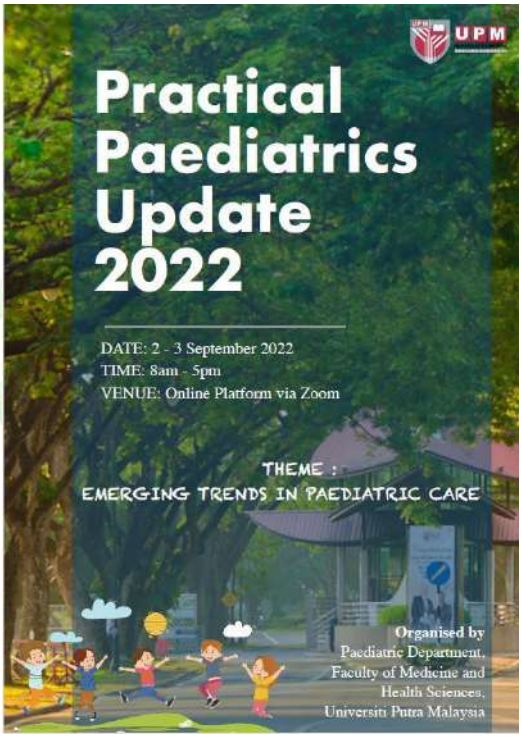
REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

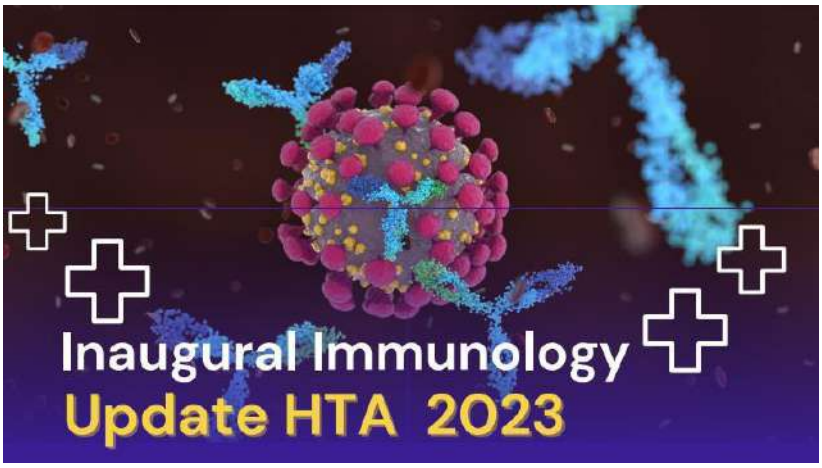
Research Highlights and Achievements:

Year	Number of Publication/Year
2020	15
2021	10
2022	12
2023	10 (Ongoing)

Table 1 Number of publications based on past research projects.

PRACTICAL PAEDIATRIC UPDATE





HEALTH RELATED QUALITY OF LIFE (HRQOL) FOLLOWING FONTAN OPERATION AT THE NATIONAL HEART INSTITUTE (IJN)

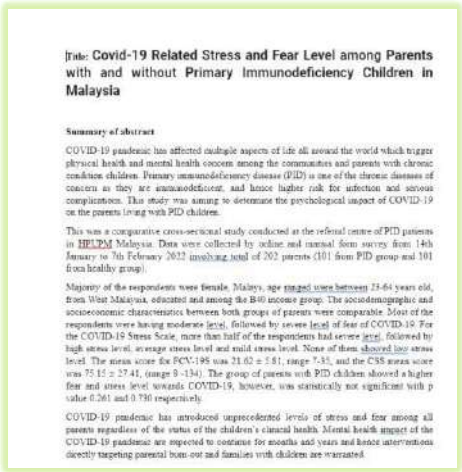
Mohamed Ajmal Haj Mohamed[1], Putri Yubbu[2], Ming Chern Leong[3]

[1] Department of Paediatric, Universiti Putra Malaysia
[2] Department of Paediatric, Universiti Putra Malaysia
[3] Paediatric and Congenital Heart Centre, Institut Jantung Negara (National Heart Institute of Malaysia)

Background: Patient with Fontan circulation suffer from morbidities and physical limitations that affects their quality of lives. Therefore, the study examined the clinical characteristic and health-related quality of life (HRQOL) of patients at the National Heart Institute (IJN) following the Fontan operation.

Methods: This comparative cross-sectional study was conducted between January 2021 and December 2021 at National Heart Institute, Kuala Lumpur, among patient who are 8 years and older who had undergone Fontan palliation for at least 1 year. Patients were assessed using electronically distributed, aged-based Pediatric Quality of Life Inventory™4 (PedsQL) Generic and Cardiac modules. The scores from the patients were compared with those of aged-match students in the Klang Valley and patient's parents.

Results: A total of 133 patients and 120 normal subjects with their parents participated in the study. Almost half of the Fontan procedure patients were at the age group of 13-18years, female dominant (51.9%), and tricuspid Atresia was the primary underlying cardiac anomaly (32%). The most common Fontan complication was valve regurgitation (52.6%), followed by arrhythmia (12.8%). Fontan patients have reduced HRQOL scores compared to their healthy peers in almost all domains. The younger patients (aged 8-12 years), low-income family and fathers with no formal education, reported significantly low scores in total, cognitive and physical scores, respectively. Patients with SpO2< 95% and taking more medication showed low HRQOL scores in a total and physical scores. Those with many complications demonstrated significantly low HRQOL scores in all domains. Patients with NYHA class I and those who underwent Cardiac MRI showed good HRQOL scores in almost all domains. There was poor agreement between patients' and parents', perceived HRQOL as most of the domains in the generic module but the difference was not as explicit in the cardiac module.



Title: Covid-19 Related Stress and Fear Level among Parents with and without Primary Immunodeficiency Children in Malaysia

Summary of abstract

COVID-19 pandemic has affected multiple aspects of life all around the world which trigger physical health and mental health concern among the communities and parents with chronic condition children. Primary immunodeficiency disease (PID) is one of the chronic diseases of concern as they are immunodeficient, and hence higher risk for infection and serious complications. This study was aiming to determine the psychological impact of COVID-19 on the parents living with PID children.

This was a comparative cross-sectional study conducted at the referral centre of PID patients in HPUPM Malaysia. Data were collected by online and manual form survey from 14th January to 7th February 2022 involving total of 202 parents (101 from PID group and 101 from healthy group).

Majority of the respondents were female, Malays, age ranged were between 25-64 years old, from West Malaysia, educated and among the B40 income group. The sociodemographic and socioeconomic characteristics between both groups of parents were comparable. Most of the respondents were having moderate level, followed by severe level of fear of COVID-19. For the COVID-19 Stress Scale, more than half of the respondents had severe level, followed by high stress level, average stress level and mild stress level. None of them showed low stress level. The mean score for FCV-19S was 21.62 ± 5.81, range 7-35, and the CSS mean score was 75.15 ± 27.41, (range 8 -134). The group of parents with PID children showed a higher fear and stress level towards COVID-19, however, was statistically not significant with p value 0.261 and 0.730 respectively.

COVID-19 pandemic has introduced unprecedented levels of stress and fear among all parents regardless of the status of the children's clinical health. Mental health impact of the COVID-19 pandemic are expected to continue for months and years and hence interventions directly targeting parental burn-out and families with children are warranted.

Outcome Of Superior Vena Cava Obstruction Following Congenital Heart Disease Intervention in Serdang Hospital

Gowinathan Vivekanandan, Putri Yubbu, Nor Azyati Yoseff

Abstract

Background: Superior vena cava (SVC) obstruction is a rare but serious complication following congenital heart disease (CHD)interventions in children. It may result in significant clinical sequelae if left untreated. There is limited data on the management approach and outcome of SVC obstruction related to cardiac intervention in children. Therefore, the study aims to investigate the clinical manifestation, management strategy and outcome of SVC obstruction following CHD interventions.

Methods: A retrospective review of the clinical records of all patients with clinical and echocardiographic or radiological findings of SVC obstruction under 18 years from January 2016 to December 2021 at Serdang Hospital was performed.

Results: There were 12 cases of SVC obstruction out of 1200 patients who underwent cardiac intervention. Of the 12 patients, 9 were males (75%); median age: 7.5 [0.5-48 months]. SVC obstruction was related to vascular injuries due to central line and pacemaker insertion (58.3%), cannulation during bypass surgery (15.3%) and following Warden procedure (25%). Facial congestion and oedema were the most common presentation (42%), followed by recurrent pleural effusion (42%), dyspnea (25%), hydrocephalus (17%), and (25%) of patients were asymptomatic. About nine patients (75%) underwent central line placement over SVC tributaries. Re-vascularization with the endoscopic technique was done in 33% of them, where two patients required re-stenting due to in-stent stenosis. Only one patient underwent surgery for SVC repair and thrombus evacuation. About 1.7% in our study cohort underwent thrombolysis as a primary intervention in acute presentation. Two deaths (16.7%) were reported from patients who underwent no intervention because of severe pneumonia secondary to recurrent pleural effusion and prolonged hospital stay.

Conclusion: Facial congestion, oedema and recurrent pleural effusion were the most common presentation. Endovascular stenting is a safe treatment modality but has a high risk of re-intervention. SVC obstructions following CHD should be managed aggressively due to high morbidity and mortality.

Title: The Risk Factors of Nosocomial Infection after Paediatric Cardiac Surgery in Serdang Hospital, Malaysia.

Presenter: Dr. Khaireen Nisa binti Mohamed Nashrudin

Background: Paediatric cardiac surgery outcomes have improved tremendously over the last 20 years and despite the advances in the survival of congenital heart disease (CHD) throughout the years, nosocomial infection (NI) after paediatric cardiac surgery remains a significant cause of morbidity and mortality in children with CHD.

Methodology: A retrospective case-control study was conducted in Serdang Hospital involving patients aged from newborn to 13- years -old who had undergone cardiac surgery over a 5-year study period.

Results: There were 181 patients who were diagnosed with NI after paediatric cardiac surgery and were identified as cases. One hundred eighty one patients with no evidence of NI were drawn via random sampling and were selected as control. There were 230 episodes of NI occurred in 181 patients out of 1260 patients who had undergone cardiac surgery, yielding a NI rate of 18.3%. The most frequent site of infection was ventilator associated pneumonia (VAP), followed by central line blood stream infection (CLABSI), pneumonia and surgical site infections (SSI). The most abundant organisms yielded in rank of frequency order were *Pseudomonas aeruginosa*, followed by *Klebsiella pneumoniae*, *Acinetobacter baumanii* and *Escherichia coli*. Multivariate analysis revealed the following independent risk factors for NI; patients with underlying Down syndrome and other syndromes, pre-operative hospitalisation days of more than 7 days, lymphopaenia, aortic cross clamp time of more than 60 days, post-operative ventilation days of more than 7 days and intensive care unit (ICU) stay of more than 7 days. The case fatality rate of NI was 21.5%.

Conclusion: The results of the present study draw attention on the preventive measures to improve the outcome of cardiac surgery. Continuous surveillance, as well as better infection control practices, must be enforced to reduce the incidence of NI, and its morbidity and mortality.

ABSTRACT

Safety and Efficacy of Pharmacological Treatments Available for Multisystem Inflammatory Syndrome in Children (MIS-C): A Systematic Review

Yasothaa Velusamy[a], Muhammad Hibatullah Rosdi[b], Putri Yubbu[c], Aiswarya Shankar[a], Thilakavathy Karuppiah[a]

[a]Department of Biomedical Sciences, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
[b]Department of Nursing and Rehabilitation, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
[c]Department of Pediatrics, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia.

Introduction: In early April 2020, rare cases associated with SARS-CoV-2 were reported in children known as Multisystem Inflammatory Syndrome in Children (MIS-C). However, this emergence resulted in lack of studies and evidence-based suggestions established in pharmacological approaches for MIS-C. **Objectives:** This study aims to describe the existing pharmacological management for MIS-C systematically, identify the available pharmacological managements, evaluate its safety and efficacy, and identify the best treatment procedures. **Methodology:** A systematic search via EBSCOhost and Scopus databases was conducted on August 18, 2021, using the terminologies children, MIS-C/PIMS, and SARS-CoV-2. A PRISMA flow diagram was used to report the study selection process. Newcastle-Ottawa Scale (NOS) and GRADE tools were used for quality analysis process. Data synthesis was done by extracting the information on treatments used, efficacy and side effects. **Results:** From the included 28 articles, 2128 children with MIS-C were studied. The main pharmacological approaches were immunomodulatory therapy: intravenous immunoglobulin

Research Highlights and Achievements:

No.	STAFF NAME	RESEARCH TITLE	Grant	Submitted/ Approved/ Rejected	Amount (RM)
1.	Assoc. Prof. Dr Intan Hakimah Ismail	Characterisation of Immunoglobulins (IgG, IgA, IgM), IgG Subclasses and Specific Antibody Responses Among Healthy At Hospital Pengajar Universiti Putra Malaysia and Hospital Serdang	IPS	Approved	20,000.00
2.	Dr Zurina Zainudin	Investigating The Cause Of Spontaneou Preterm Births Through Whole Exome DNA Mutation And Quantitative Gene And Protein Expression Analyses	FRGS	Ongoing (2020 – 2023)	185,900
3.	Dr. Putri Yubbu	Gene Mutations In Heterotaxy Syndrome With Congenital Heart Disease Using Next Generation Sequencing Technology	Heartlink	Approved- MoA	29,273.99
		Outcomes Following Prenatal Diagnosis Of Fetal Rhabdomyomas: A Fetal Heart Society Collaborative Study	Fetal Heart Society	Aproved- MoA	40,000.00
		Clinical Profile And Genetic Analysis Of Children With Heterotaxy Syndrome Using Whole Exome Sequencing	FRGS	Rejected	190,000.00
		Improving Clinical Skill That Leverage Audio-visual Aids In Detecting Abnormal Heart Sounds Among Medical Students	GIPP	Rejected	20,000.00
4.	Dr. Melissa Anne Nunis	Factors Associated With Successful Peripheral Intravenous Cannulation Among Neonates In Hospital Pengajar Universiti Putra Malaysia	IPM	Ongoing	48,360
5.	Dr. Khairoon Nisa Mohamed Nashrudin	Title: Pemindahan Ilmu Mengenai Asas Pertolongan Cemas Kanak- Kanak ('Basic First Aid For Children') Kepada Komuniti Suri Rumah Bandar Baru Bangi.	(KTGS)	Submitted	9050

Current Research Activities:

YEAR	TITLE	PRINCIPAL INVESTIGATOR	CO-INVESTIGATORS	BUDGET (RM)	ETHICS APPROVAL
2021	Discovery of genetic aberrations in paediatric patients suspected of rare genetic disorders	Assoc. Prof. Dr.Ting Tzer Hwu, Jabatan Pediatrik	• Prof. Madya Dr. Intan Hakimah Ismail • Dr. Lee Yee Lin • Dr. Mohd Azri Bin Zainal Abidin • Dr. Zurina Zainudin • Dr. Nor Azyati Yusoff • Dr. Melissa Anne Nunis • Dr. Sithra A/P Rengasami		JKEUPM-2021-436
2021	Efficacy of vein translumination device among neonates admitted to HPUPM- a randomized control study	Dr. Melissa Anne Nunis	• Dr. Zurina Zainuddin • Dr. Lim Zi Han (master student)	IPM Grant RM48300	JKEUPM-2021-039
2021	Covid 19 stress and fear levels among parents if primary immunodeficiency children in Malaysia	Prof. Madya Dr. Intan Hakimah Ismail	• Dr. Mohd Azri Bin Zainal Abidin • Dr. Saidatul Saadah Ramlah (master student)		JKEUPM-2021-715
2021	Health related Quality of Life among primary Immunodeficiency patients in HPUPM	Prof. Madya Dr. Intan Hakimah Ismail	Dr. Mohd Azri Bin Zainal Abidin Dr.Theiva Rani (master student)		JKEUPM-2021-353

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

Challenges

The department found that it was hard to do research for a few reasons:

1. Unsupportive environment to do research.
2. Long process for ethical clearance and approval.
3. Long process to get MoA agreement to complete.

Motivation

Moving forward by sharing knowledge and joining more conferences, programs, workshops etc.

Steps were taken to improve clinical research

Step forward for publications

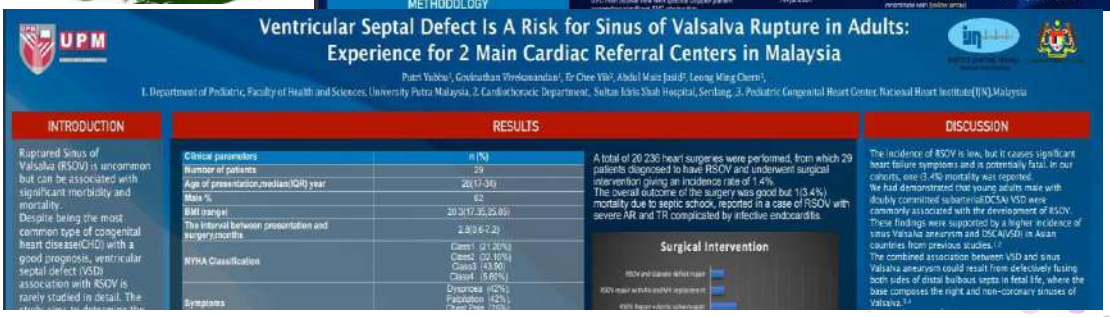
- Adding the APC cost in Grant proposal.
- Using Tabung Amanah as Grant for the lecturer who do not have grant

Brainstorming ideas

- Participating in multiple workshops online including CRAM CRU online.

Find good opportunities for networking and collaboration

- Collaborating with private industry for clinical trials.



We would like to thank Dr. Putri Yubbu for 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 HSAAS website at CRAMs Members.
Be featured in our next series of RECRUS Newsletter by contacting us at CRU!

SECTION C: CLINICAL EPIDEMIOLOGY

Appraisals in Meta-journal Hour 19

By Salwana, and BH Chew

The paper:

Comparative Effectiveness of Aspirin Dosing in Cardiovascular Disease DOI: 10.1056/NEJMoa2102137

Why was this study conducted?

The introduction section of the paper discusses the disagreement between previous findings from Observational and Randomized Control Trial studies on the different dosages that had different risks on patients with atherosclerotic cardiovascular diseases. In the US, aspirin was recommended in patients with established atherosclerotic cardiovascular disease to lower the risk of adverse health outcomes. 60% of patients discharged from the hospital after myocardial infarction were treated with 325mg of aspirin daily and the dose was changed by 25 by a factor in the proportional use of high-dose aspirin varying across participating centers (Hall et al. 2014). The European Society of Cardiology (Montalescot et al., 2014) provides clinical guidelines on the definitive recommendations for aspirin dosage, however, the American College of Cardiology – American Heart Association (Amsterdam et al. 2014) does not have similar guidelines. As such, the appropriate dose of aspirin for patients with established atherosclerotic cardiovascular disease is controversial. The author found that there was uncertainty about which aspirin dose clinicians should recommend. Still, questions exist regarding the side-effect profile, including potential differences in major bleeding or discontinuation due to minor bleeding or dyspepsia. The evidence supporting a preferred aspirin dosage for atherosclerotic cardiovascular disease (ASCVD) can have significant public health implications for outcomes such as death, myocardial infarction, stroke, and major bleeding.

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Watch the video recording on:

The study was based on ADAPTABLE (Aspirin Dosing: A Patient-Centric Trial Assessing Benefits and Long-Term Effectiveness) (Gravel et al., 2020), an open-label, pragmatic design to provide real-world evidence on the optimal aspirin dosing strategy for these patients. The study aimed to compare the effectiveness of two different doses of aspirin (81 mg and 325 mg per day) in reducing the risk of death from any cause, hospitalization for myocardial infarction, or hospitalization for stroke among patients with established atherosclerotic cardiovascular disease.

The authors used an open-label, pragmatic, randomized, controlled trial comparing the effectiveness of 81-mg- and 325-mg daily aspirin doses as secondary prevention in patients with established atherosclerotic cardiovascular disease

How was it done?

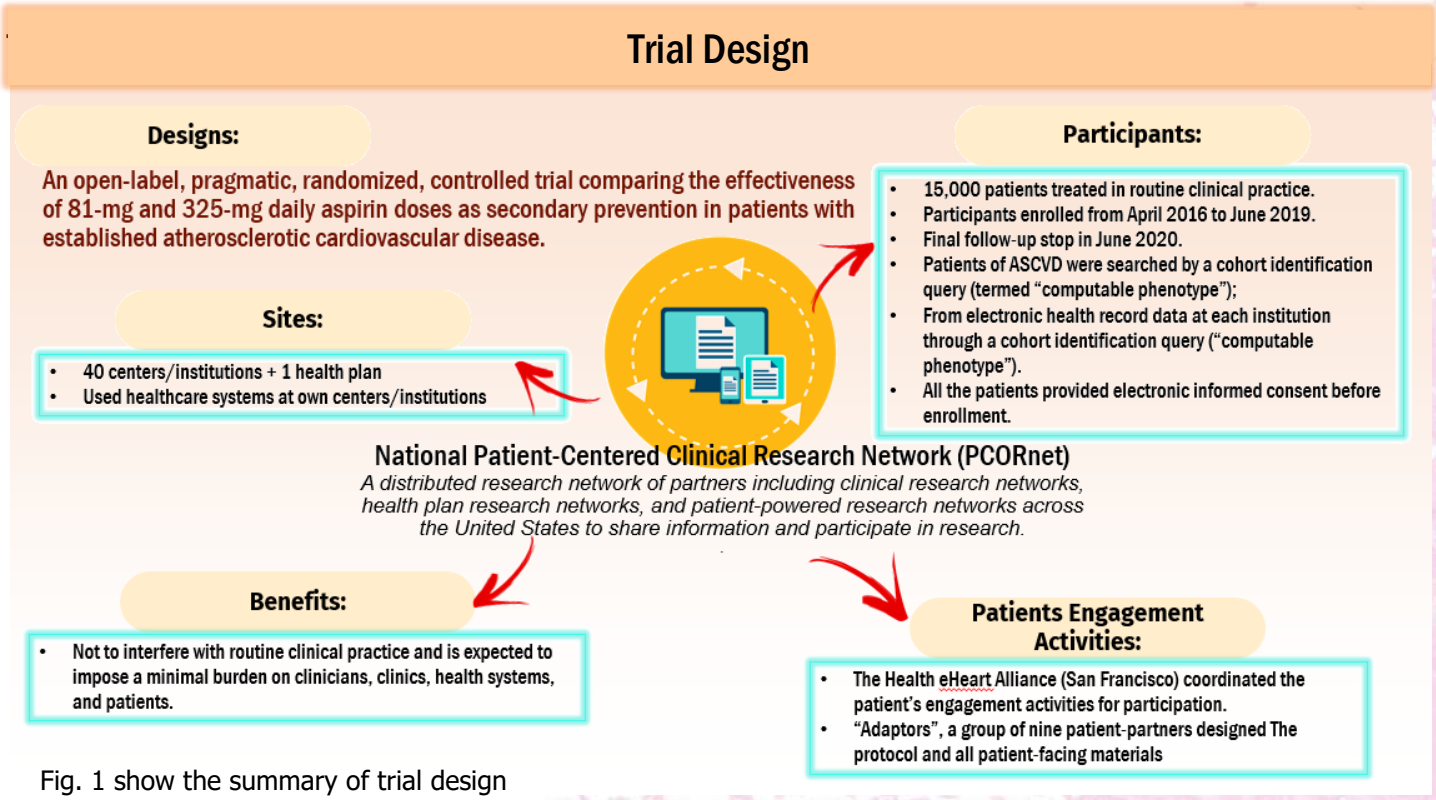


Fig. 1 show the summary of trial design

Trial Population and Recruitment Strategies

INCLUSION AND EXCLUSION CRITERIA

Patients with established atherosclerotic cardiovascular disease following criteria below:

INCLUSION

Established ASCVD was defined by any of the following:

1) prior myocardial infarction;
2) prior coronary revascularization procedure (percutaneous coronary intervention or coronary-artery bypass grafting surgery);
3) prior coronary angiography demonstrating ≥75% stenosis of at least 1 epicardial coronary artery; or
4) history of chronic ischemic heart disease, coronary artery disease, or ASCVD.

ENRICHMENT CRITERIA

Have at least 1 enrichment criterion:

- age ≥65 years
- serum creatinine ≥1.5 mg/dL,
- diabetes mellitus
- current cigarette smoking
- cerebrovascular disease
- peripheral artery disease
- heart failure (systolic or diastolic)
- left ventricular ejection fraction <50%
- systolic blood pressure ≥140 mm Hg, o
- low density lipoprotein cholesterol ≥130 mg/dL.

EXCLUSION

Exclusion criteria included:

- History of significant allergy to aspirin,
- History of gastrointestinal bleeding within 12 months.
- Bleeding disorder that precluded aspirin use.
- Current or planned use of an oral anticoagulant or ticagrelor.
- Female patients who were pregnant or nursing.
- There were no exclusion criteria for upper age limit, comorbid conditions, or other concomitant
- medications.

- There were no exclusion criteria for upper age limit, comorbid conditions, or other concomitant medications.

Randomization and Trial Treatment

T0

Baseline

Demographic characteristics:

- Reported by patients.
- Age, sex, race, ethnic group, current tobacco use, and medication use

Clinical characteristics and medical history:

- Retrieved by means of a trial-specific query of **the electronic health record (with the use of the PCORnet Common Data Model format)** at enrolling health centers.
- A look-back period of 5 years from the date of enrollment.

The PCORI Patient-Reported Outcomes Common Measures short form was administered through the patient portal (or call center) baseline

T2

Consent

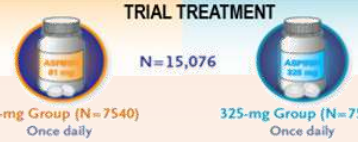
RANDOMIZATION

- In patient portal
- Buy aspirin over the counter

PATIENT PORTAL FOR AN EARLY STUDY ENCOUNTER

- By telephone contact the call center for non-Internet participants.
- Between 1-3 weeks after randomization.
- To confirm adherence to the appropriate dosage and answer questions about secondary contact information.

TRIAL TREATMENT



- 1:1 ratio for 3 months or 6 months follow-up.
- Were followed for a median duration of 26 months.

Routine follow-up (no n-person visits at the trial centers during follow up)

T2

3 months Follow-up

T3

6 months Follow up

Asked about adherence to the trial medication, the use of concomitant medications, recent hospitalizations (and primary diagnoses of hospitalizations), and patient-reported outcomes.

- Internet participants were sent email reminders to complete the trial visits.
- Non-Internet participants received telephone calls from the call center.
- Internet participants who had not completed a trial follow-up encounter for 6 months were converted to non-Internet participation and contacted by the call center in order to complete follow-up.
- When patients missed an encounter and returned for a subsequent encounter, they were asked to complete information on hospitalizations (trial outcomes) that had occurred since the last complete encounter.

The PCORI Patient-Reported Outcomes Common Measures short form was administered through the patient portal (or call center) at 6 months

- 1:1 ratio to follow-up visits every 3 months or every 6 months to better understand the effect of the frequency of clinical trial assessments on patient engagement and follow-up.
- $25 remuneration for each participant

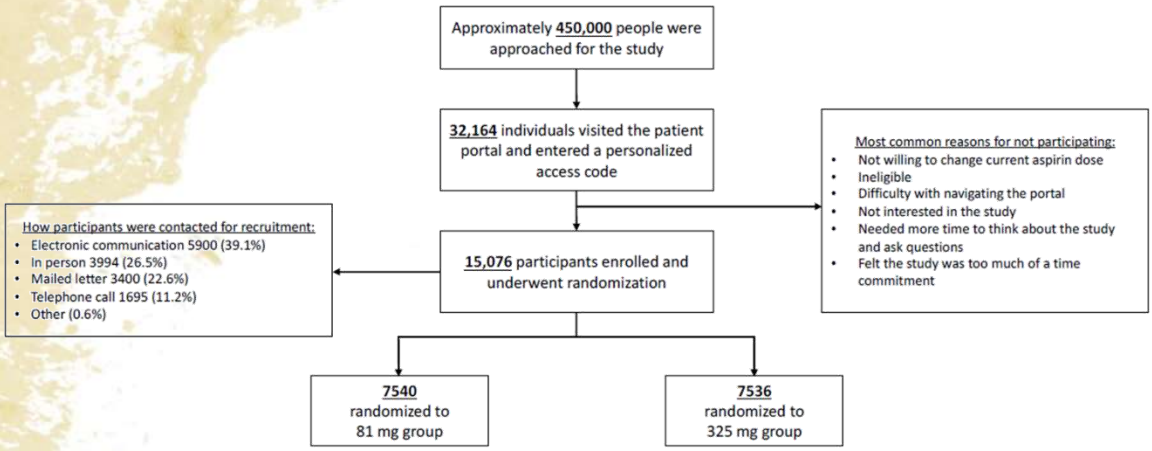


Fig. 2 Randomization, treatment, and follow-up of participants.

Its Data Sources

Multiple data sources:

- Patient report at the scheduled trial encounters.
- Queries of electronic health record data organized according to the PCORnet Common Data Model format.
- Linkage with data sources from PCORnet private health plan partners (Aetna, Anthem, and Humana); and
- Linkage with fee-for-service Centers for Medicare and Medicaid Services claims data.

Sample Size Calculation

Early sample size was 20,000

- 85% power to detect a 15% relative risk reduction assuming a primary effectiveness outcome rate of 5% per year in the higher-risk arm.
- 24 months recruitment/maximum follow-up of 30 months/5% annualized rate of loss to follow-up.

Longer by 14 months

- Slower recruitment
- Longer follow up duration
- Limited fundings

Reduced sample size to 15,000.

- 88% power to detect a 15% relative risk reduction in the primary outcome, assuming an annualized event rate of 4.6% in the higher-risk arm, leading to an overall event rate below 5%
- 38 months recruitment/maximum follow-up of 50 months/5% annualized rate of loss to follow-up.

- Slower recruitment
- Longer follow up duration
- Limited fundings

Table 6

Overall annualized event rate (%)	Relative Risk	Annualized event rate in low risk group (%)	Annualized event rate in high risk group (%)	Number of Events	Power
4.2	0.800	3.7	4.7	1321	0.99
4.2	0.825	3.8	4.6	1320	0.96
4.2	0.850	3.9	4.5	1322	0.88
4.4	0.800	3.9	4.9	1381	0.99
4.4	0.825	4.0	4.8	1381	0.97
4.4	0.850	4.1	4.8	1383	0.89
4.6	0.800	4.1	5.1	1441	0.99
4.6	0.825	4.2	5.0	1442	0.97
4.6	0.850	4.2	5.0	1439	0.90
4.8	0.800	4.3	5.3	1501	1.00
4.8	0.825	4.3	5.3	1502	0.98
4.8	0.850	4.4	5.2	1503	0.92

Table 6 in the article presents calculations performed for a sample size of 15,000 using PASS software

Table 6 shows the primary effectiveness endpoint:

- Rates of 4.6%, 4.8%, 5.0%, and 5.2% per year in the higher-risk arm.
- Annualized rate of loss to follow-up of 5%, 2-sided significance level alpha of 0.05.
- Clinically meaningful RR reduction for the treatment effect between aspirin doses for primary effectiveness endpoint of 20%, 17.5%, and 15%.
- Assuming an annualized event rate of 4.6% in the higher risk arm and a 15% RR reduction (annualized event rate of 3.8% in the lower risk arm) leads to 88% power and requires 1322 primary outcome events.

Table 7 shows the primary safety endpoint for:

- Hospitalization for major bleeding, power calculations were based on estimated primary event rates of 2%, 2.5%, and 3% per year (in the higher dose arm); Annualized rate of loss to follow-up of 5%; 2-sided significance level alpha of 0.05;
- 7,500 participants in each treatment arm; total enrollment of 38 months; and a maximum follow-up period of 50 months.
- Power greater than 85% to detect an RR reduction of 25%, and for event rates of 2.5% or greater, power will be close to 80% to detect an RR reduction of 20%.

Table 7

Annualized event rate in higher-dose arm	Relative risk reduction	No. of events	Power
2%	25%	436	86%
	20%	449	66%
	15%	461	42%
2.5%	25%	544	92%
	20%	559	76%
	15%	575	50%
3%	25%	651	96%
	20%	669	83%
	15%	688	58%

Table 7 in the article presents calculations performed for a sample size of 7,500 each arm using PASS software.

Clinical Outcomes

1. **Primary effectiveness outcomes**
   The time to the first occurrence of any event in the composite of death from any cause, hospitalization for myocardial infarction, or hospitalization for stroke.
2. **Pre-specified secondary outcomes**
   Including coronary revascularization (percutaneous coronary intervention or coronary artery bypass grafting), the individual components of the primary outcome, and hospitalization for transient ischemic attack.
3. **Primary safety outcomes**
   Hospitalization for major bleeding with an associated blood-product transfusion.

Statistical Analysis

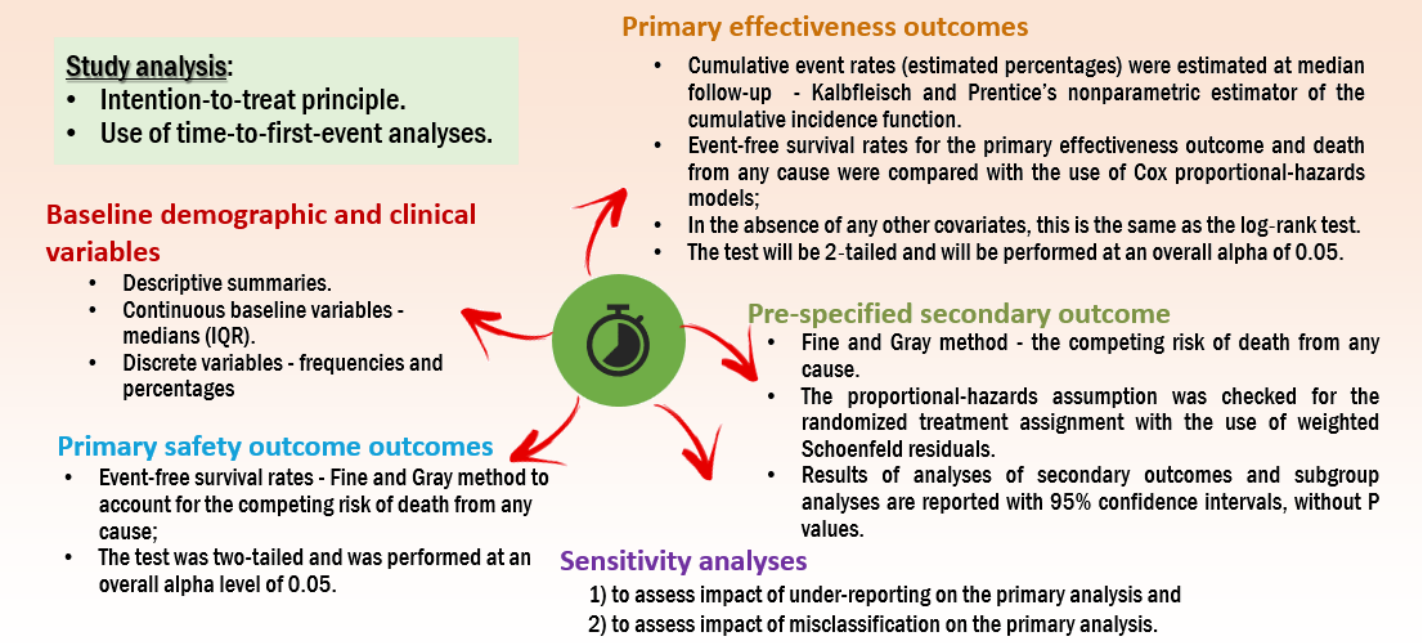


Fig. 3 show the summary of statistical analysis used in this study

What was the finding?

1. **Patients, Medication Use, And Follow-Up**
   - **Demographic information:** The median age was 67.6 years, 68.7% were men, 8.7% were Black, 3.2% were Hispanic, 1.0% were Asian, and 6.5% and 6.9% had undetermined race and ethnic group, respectively.
   - **Clinical characteristics at baseline** (List of figure: Table 1)**:**
     - 35.3% of the patients had previous myocardial infarction and 53.0% had previous coronary revascularization procedures within 5 years before enrolment.
     - 96.0% of the patients had been taking daily aspirin before enrolling in the trial.
       - 85.3% reported taking 81 mg, 2.3% reported taking 162 mg, and 12.2% reported taking 325 mg.
     - A total of 3081 of 13,818 patients (22.3%) were taking a P2Y12 inhibitor at the time of enrolment, with 2849 of those patients (92.5%) taking clopidogrel.

2. **Primary effectiveness outcome:**
   - 590 patients (estimate at median follow-up, 7.28%) in the 81-mg group and 69 patients (estimate at median follow-up, 7.51%) in the 325-mg group (hazard ratio, 1.02; 95% confidence interval [CI], 0.91 to 1.14) (List of figure: Figure 1A and Table 2).
   - The treatment effect on the primary effectiveness outcome appeared similar across the prespecified subgroups.
   - There was no difference in treatment effect according to the secondary randomization to 3 months or 6 months of follow-up. I
   - Individual components:
     - Death from any cause:
       - 315 patients (estimate at median follow-up, 3.80%) in the 81-mg group and 357 patients (estimate at median follow-up, 4.43%) in the 325-mg group (hazard ratio, 0.87; 95% CI, 0.75 to 1.01)
     - Hospitalizations for myocardial infarction and stroke:
       - Similar between 2 groups.

3. **Pre-specified secondary outcomes:**
   - Similar between 2 groups.
   - Mean scores for patient-reported outcome measures were similar in the two groups at baseline and follow-up.

4. **Safety Outcomes:**
   - Hospitalization for major bleeding with an associated blood-product transfusion (primary safety outcome).
   - 53 patients (estimate at median follow-up, 0.63%) in the 81-mg group and 44 patients (estimate at median follow-up, 0.60%) in the 325-mg group (hazard ratio, 1.18; 95% CI, 0.79 to 1.77).

5. **Adherence to trial Medication**
   - Aspirin discontinuation: 7.0% of the patients assigned to the 81-mg dosing strategy and 11.1% of those assigned to the 325-mg dosing strategy.
   - Dose switching: 7.1% in the 81-mg group and 41.6% in the 325-mg group (List of figure: Table 3)
   - Reason for discontinuations:
     Table 1 below shows the reasons and the number of patients for each arm.

Reasons	81mg of daily aspirin	325mg of daily aspirin
Patient preference	65 (18.6%)	84 (15.9%)
Need for oral anticoagulant -	74 (21.2%)	110 (20.8%)
Bleeding or bruising	18 (5.2%)	24 (4.5%)
Other medical condition	102 (29.2%)	204 (38.6%)
Cited the primary prevention studies or ACC/AHA guidelines.	33 (9.5%)	36 (6.8%)
"Other" as reasons	57 (16.3%)	70 (13.3%)

6. **Sensitivity Analysis**
   - Robustness of results to potential underreporting and misclassification of outcomes:
     - Potential missing data when patients moved or left the enrolling health system - No changes in results.
     - Potential misclassification of outcomes - No changes in results.
   - Prespecified landmark analysis that omitted outcomes during the first 10 days of follow-up after randomization for events that were probably related to previous aspirin use - No changes in results.
   - Time-dependent covariates (regardless of randomized dose):
     - Patients who took 81 mg had a higher risk of death from any cause, hospitalization for myocardial infarction, or hospitalization for stroke than those who took 325 mg (hazard ratio, 1.25; 95% CI, 1.10 to 1.43).

Discussion

According to a 2014 study retrieved from the National Cardiovascular Data Registry, 60% of patients released after a heart attack were prescribed 325 mg of aspirin daily, indicating uncertainty about the optimal dosage. Before the study, the majority of the patients (85.3%) were taking 81 mg of aspirin daily, however many switched their assigned dose during the trial, possibly due to patient preference, clinician practices, or development of side effects or concurrent illnesses. The publication of updated guidelines from the American College of Cardiology-American Heart Association Guideline Focused Update on Duration of Dual Antiplatelet Therapy in Patients with Coronary Artery Disease in 2016 may also have influenced dose switching, particularly for patients on long-term dual antiplatelet therapy or those who had percutaneous coronary intervention. Patients discontinued the 325-mg dosing strategy more frequently than the 81-mg dosing strategy, possibly due to published reports questioning the effectiveness of aspirin in preventing cardiovascular events; efforts to combat misinformation and confusion about aspirin's role in preventing secondary outcomes in people with atherosclerotic cardiovascular disease were challenging.

Lesson learned:

- Lessons learned from this trial include the feasibility of identifying a large cohort of eligible patients, engaging and recruiting them, and ensuring long-term retention and adherence to trial protocols through value-added methods.

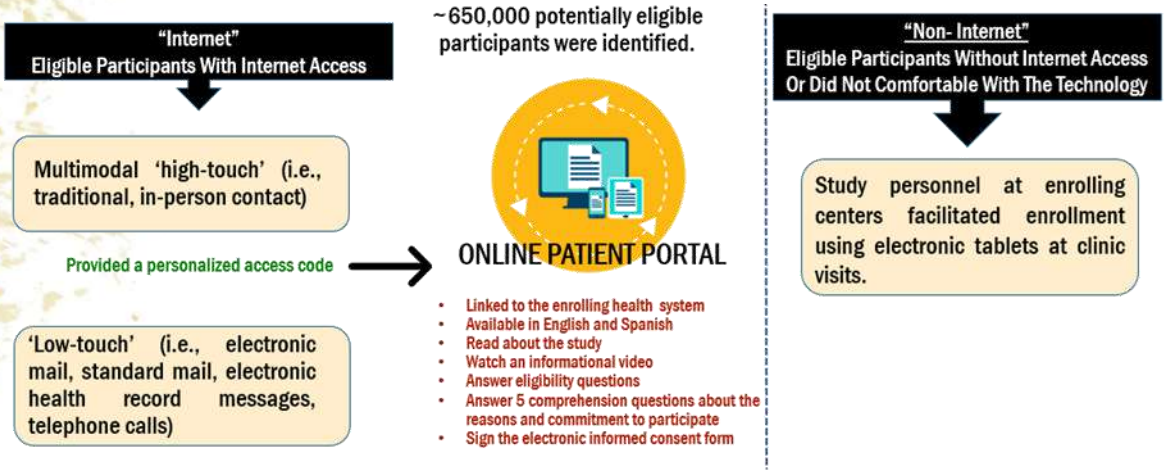


Fig. 4 show the recruitment strategies used in this study

Implications:

- This trial was the first demonstration project for pragmatic clinical trials within PCORnet and recruited over 15,000 patients from 40 centers in the US using electronic methods and low-touch recruitment strategies.
- The trial involved nine patient partners who provided input throughout the trial and incorporated electronic health record data and patient-reported information to reduce the burden on patients and sites.
- Lessons learned from this trial include the feasibility of identifying a large cohort of eligible patients, engaging and recruiting them, and ensuring long-term retention and adherence to trial protocols through value-added methods.

Limitations:

- The trial was open-label, which means that both the patients and the clinicians knew which dose of aspirin the patient was taking. This could have led to biases or perceptions about the risks and benefits of aspirin dosing, which may have influenced the dose changes over time.
- Patients who primarily took 81 mg of daily aspirin before the trial were included in the study. This could have affected the results since the patients commonly switched their randomized dose during the trial.
- Enrollment of women and traditionally underrepresented groups with atherosclerotic cardiovascular disease fell short of expectations and short in duration. This resembled past typical cardiovascular study enrolment and may affected the results.
- The study did not assess nonserious or minor bleeding adverse events.

Conclusions:

The study found no significant differences in cardiovascular events or major bleeding between patients assigned to 81 mg and those assigned to 325 mg of aspirin daily in patients with established cardiovascular disease. The results suggest that there is uncertainty about the recommended dose of aspirin for patients with atherosclerotic cardiovascular disease. The study highlights the need for evidence to support a preferred dosage of aspirin, as it can have a major public health impact on outcomes such as death, myocardial infarction, stroke, and major bleeding in patients with atherosclerotic cardiovascular disease.

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

The paper contributes to the understanding of the appropriate dose of aspirin in patients with established atherosclerotic cardiovascular disease. It compares the effectiveness and safety of two different doses of aspirin (81 mg and 325 mg) in reducing the risk of death, myocardial infarction, stroke, and major bleeding. Based on the findings, the study provides evidence that there were no significant differences in cardiovascular events or major bleeding between patients assigned to 81 mg and those assigned to 325 mg of aspirin daily. The results of this study have implications for clinical practice and public health, as they contribute to the ongoing discussion on the recommended dose of aspirin for patients with atherosclerotic cardiovascular disease.

As researchers, we can extract several important insights from this study. First and foremost, it provides valuable insights into the comparative effectiveness of different aspirin dosing strategies in patients with established atherosclerotic cardiovascular disease. The study utilized an open-label, pragmatic design, which reflects real-world clinical practice and allows for a broader understanding of the comparative effectiveness of different aspirin dosing strategies. Many large-scale cardiovascular clinical studies are impacted by rising costs and restricted recruitment. Implementing a computable phenotype, which is a set of executable algorithms for identifying a group of clinical features derived from electronic health records or administrative claims data, is critical for successful enrollment in large-scale pragmatic clinical trials. The practical implications of this finding would benefit clinicians and patients in terms of selecting the appropriate aspirin dose for cardiovascular disease management, to address the high prevalence of aspirin use among patients with established cardiovascular disease and the predominance of the 81 mg dose in this population. Clinicians may consider individual patient factors, such as bleeding risk when deciding on the aspirin dose for cardiovascular disease prevention.

Although the findings suggest that there is no significant difference in the primary effectiveness outcome (composite of death, hospitalization for myocardial infarction, or hospitalization for stroke) between the 81 mg and 325 mg dosing strategies, one should look closely into the findings. Studies often combine several events, for example, death myocardial infarction, or stroke, into a single study outcome. This is called a composite endpoint. It is usually used in a modern phase-III trial, especially for cardiovascular disease and cancer. The purported benefits of combining multiple types of outcome is to collect more events, which usually increase statistical power, decrease sample-size requirements, shorter trial duration, and decrease cost (Freemantle et al., 2003). However, the selected individual components of a composite endpoint, are not always clinically meaningful and not important for individual patients (not similar), as the combinations might not establish a relationship of outcome variables (Montori et al. 2005). Following that, the author suggested that some clinical and regulatory requirements need to be fulfilled to ensure the correct interpretation of composite endpoints and for the validation of these types of outcomes (Freemantle et al., 2003) (Montori et al. 2005). In the end, the treatment can be considered to affect all components or just a single outcome.

In addition to the addressed issue, Santamaría et al. (2023) also suggested that deeper considerations should be taken care of when analyzing the outcomes corresponding to the time-to-first-event analysis, which was introduced by Pocock et al. (2012). The analysis should be done following the distinct individual events that happen within the composite outcome that lead to separate events with their clinical significance. The components of a composite outcome will be analysed by putting severity into account by assigning weights severity and evaluated of pairs patients based on their risk estimates. On note to the article on appraised, the study employed a time-to-event analysis to assess the primary effectiveness outcome (composite of death, hospitalization for myocardial infarction, or hospitalization for stroke) and the primary safety outcome (hospitalization for major bleeding). This approach should provide a comprehensive evaluation of the outcomes over time.

However, it is crucial to acknowledge some limitations of the study. This study was based on an open-label and pragmatic design, thus it may introduce biases and confounding factors. Failure to assess other potential factors that could influence aspirin effectiveness and safety. Other than that, reliance on self-reporting of aspirin use may introduce recall bias and inaccuracies. Related to the relatively short follow-up period, it may not capture long-term outcomes and potential dose effects over time. As suggested by the authors, further studies are required to understand the following; Whether a high incidence of dose switching in the group assigned to the 325-mg dose affected trial results; How results might differ with longer-term follow-up and a more diverse trial population; and what the incidences of non-serious adverse events and minor bleeding are and whether these affect adherence.

In conclusion, this research offers valuable insights into three aspects; Effectiveness, safety outcomes, and adherence., in quote "Effectiveness and safety outcomes did not differ significantly with daily use of 81 mg as compared with 325 mg of aspirin in patients with established atherosclerotic cardiovascular disease, and adherence was better with the 81-mg dose".

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RESEARCH COLLOQUIUM SERIES 1/2023

Work Related Musculoskeletal Disorders Among Healthcare Workers In Hospital Pengajar Universiti Putra Malaysia (HPUPM): The Prevalence And Association Factors

Presented by:

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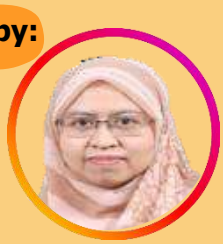

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BACKGROUND

In Malaysia, the number of reported occupational health disease cases increases every year. Almost a third of all cases of sick leaves among healthcare professionals are reported to be linked to work related musculoskeletal disorder (WMSDs). Physical factors such as non ergonomic workplace, involvement in manual handling tasks, heavy lifting and other strenuous tasks are the risk factors. The long working hours and the need to attend to many patients at one time together with working uncomfortable positions are also known risk factors among the healthcare workers. Thus, this study aimed To determine the prevalence of WMSDs and its association with age group, gender, working experience and nature of job among health care workers in HPUPM.

METHOD

A cross sectional study was conducted among health care workers in HPUPM, Serdang, Selangor. A self-administered online questionnaire containing three sections which include sociodemographic factors, musculoskeletal disorders and the risk factors and effects of musculoskeletal disorder was distributed in April 2021. We divided the healthcare workers into three categories based on their nature of job. Group 1 consists of doctors and medical lecturers Group 2 consisting of nurses, medical attendants, therapists and medical assistants; and Group 3 consisting of pharmacists, radiographers and laboratory assistants.

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RESULTS

There were 167 responses received, but only 145 (96.67%) were in the inclusion criteria. Most of the respondents were from the age groups of 20-30 years old with 77 out of 145 (53.1%). Majority were female, 95 out of 145 (65.5%) and most of the respondents fall under group 2 with 81 responses out of 145 (55.9%0). Most of the respondents had working experiences of less than 5 years which is 79 out of 145 (54.5%). Majority had an ideal BMI with a frequency of 57 out of 145 (39.3%).

Out of 145 respondents, 94 of them (64.83%) of them experienced musculoskeletal disorders (MSDs) in the past 12 months. Out of the 94 respondents who have musculoskeletal disorder, 35 respondents have a single part of the body region affected while 59 respondents have multiple body regions affected by MSDs. Among the 94 respondents, the most common body region affected by musculoskeletal disorders (MSDs) is the back region with frequency at 58 respondents out of 94 (61.7%) followed by shoulder 31 (33%), ankle and foot 26 (27.7%),neck region 25 (26.6%) knees (22.3%),wrist and hand 18 (19.1%) ,hip and thigh 12 (12.8%) and elbow 7 (7.4%).

Among 94 respondents, 60 respondents (62.8%) claimed to have work-related musculoskeletal disorders (WMSDs). The most common physical risk factors that lead to musculoskeletal disorder are "working in the same position for a long period of time" 44 (46.8%), followed by "lifting / transferring dependent patients" 43 (45.7%), "not enough rest / break during working" 36 (38.3%) and "carrying / lifting heavy equipment" 34 (36.2%). Out of 60 healthcare workers, 44 (73.3%) claimed that their works are affected by WMSDs with only 8 (13.3%) of them receiving treatment. However, most of them (44, 73.3%) do not need a medical certificate.

Among the respondents who were experiencing WMSDs, most of them are in the age range of 20-30 years (41.6%), female (43.3%), those with years of experience of less than 5 years (38%) and healthcare workers in Group 2 (43.2%). Fisher Exact Test was used to determine the association between WMSDs with age and years of working experience. The association between WMSDs with gender and nature of job on the other hand were determined by using Chi Square Test. However, after using these tests, there was no statistically significant association between WMSDs and the associated factors

CONCLUSION

The prevalence of WMSDs is the highest in healthcare workers with the age range of 20-30 years old with prevalence of 53.3% and in female healthcare workers at 68.3%. The workers with years of experience of 1-5 years old with prevalence of 50% are more susceptible to developing WMSDs. The occurrence of WMSDs is higher in group 2 which consists of the medical assistants, staff nurses, attendants, therapists with prevalence of 58.3%. There is no significant association between age, gender, year of experience and nature of job with WMSDs. Among the respondents who are experiencing WMSDs, it is found that the back region is the most common region of WMSDs among healthcare workers in HPUPM with the prevalence of 61.7%.Ergonomic programmes on prevention and coping strategies for musculoskeletal disorders are recommended for healthcare workers in order to reduce the rate of occupational hazards and also promote efficiency in patient care.

Research Colloquium

Series 2/2023

KNOWLEDGE AND PRACTICE OF HOSPITAL ACQUIRED INFECTIONS (HAI) PREVENTION AMONG REGISTERED NURSES IN HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS)

By: Nur Fadlin Izzah Rozuki & Ms. Siti Aishah Hamzah (Supervisor)
Department of Nursing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Introduction: Hospital Acquired Infections, in other words, are illnesses that were picked up in a hospital or healthcare facility and that manifest for the first time 48 hours or more after hospital admission or within 30 days of release following in-patient care. Hence, this study could contribute to determine the knowledge and practice of hospital acquired infections prevention among registered nurses in Hospital Sultan Abdul Aziz Shah.

Objective: To determine the knowledge and practice of hospital acquired infections (HAI) prevention among registered nurses in Hospital Sultan Abdul Aziz Shah (HSAAS).

Methods: A cross-sectional study was carried out among 200 of registered nurses. A self-administered questionnaire by face-to-face session was used in this study. The questionnaire comprises three parts which are sociodemographic, knowledge and practice of HAI prevention. SPSS version 29.0 is used for data entry and analysis. Descriptive analysis, Pearson's correlation, independent t-test and One-way independent ANOVA were used to evaluate the resulting data.

Result: The findings in this study showed that a total score of knowledge with the mean of 18.83 ± 2.06 while the mean for a total score of practice is 38.66 ± 6.22. The results showed no significant association between sociodemographic with knowledge of HAI prevention. The result also demonstrated that there is no significant association between the sociodemographic characteristics and practice of HAI prevention. Meanwhile, the result shows there is no significant association between knowledge and the practice of HAI prevention among registered nurses in HSAAS (p=0.650).

Conclusion: The result obtained in this study showed that the majority of respondents had good knowledge and practice of HAI prevention. Thus, continuing educational programs, in-service training and ensuring availability of the necessary guidelines are some of the important steps to improve knowledge and practice of nurses regarding to prevention of HAIs.

Keywords: Hospital acquired infections, Nurses, Knowledge, Practice

Research Colloquium

Series 2/2023

KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS PATIENT SAFETY AMONG REGISTERED NURSES IN A TEACHING HOSPITAL

By: Mok Jia Yi & Ms. Parameseveary A/P Subramaniam (Supervisor)
Department of Nursing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Background: Patient safety is defined as the absence of preventable harm to a patient, as well as the reduction of unnecessary harm associated with health care. Adverse events lead to morbidity and mortality. Patient safety becomes foundation of health care systems that are essentially dependent upon nurses. Therefore, nurses need to have good knowledge, attitude and practice towards patient safety to ensure quality care.

Objectives: To study the level of knowledge, attitude and practice towards patient safety among registered nurses in a teaching hospital in Selangor, Malaysia. Methods: A cross sectional study by using simple random sampling was conducted in Hospital Sultan Abdul Aziz Shah, Selangor, Malaysia. Data were collected through Google Form. The questionnaire compromises four parts including socio-demographic, knowledge, attitude and practice towards patient safety. Data

Analysis: Descriptive analysis, Pearson's correlation and Pearson Chi-square was employed for data analysis using SPSS version 29.

Result and Discussion: A total of 143 respondents participated in this study. The findings showed that 72 (50.3%) nurses had good knowledge, 112 (78.3%) nurses had moderate attitude and 105 (73.4%) nurses had good practice. Nurses' knowledge, attitude, and practice towards patients' safety showed significant associations with certain socio-demographic characteristics. Meanwhile, the results showed that knowledge and attitude were positively correlated with practice towards patient safety ($p<0.01$).

Conclusion: This study showed that almost half of the respondents had good knowledge, attitude and practice towards patient safety. Thus, it is important to maintain and further enhance initiatives to reinforce positive behaviors and further improve patient safety.

Keywords: Knowledge, Attitude, Practice, patient safety, registered nurse

Research Colloquium
Series 2/2023

FACTORS ASSOCIATED WITH LOW BACK PAIN (LBP) AMONG NURSES IN HOSPITAL SULTAN ABDUL AZIZ SHAH (HSAAS)

By: Nur Afza Binti Khairul Anuar, Dr. Ruthpackiavathy A/P Rajen Durai & Ms. Siti Aishah Hamzah (Supervisor)
Department of Nursing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Background: Nurses are particularly susceptible to low back pain (LBP) because of the basis of their physically demanding employment and LBP also a significant cause of morbidity among healthcare workers. However, in Malaysia there is still lacks of study of LBP among nurses, especially that related to factors associated with LBP among registered nurses. LBP also was thought to be multifactorial condition with a variety of potential contributing factors to developing the significant factors for LBP. Therefore, this study was conducted to fill the gap of insufficient literature in Malaysia regarding LBP among nurses and determine which sociodemographic and occupational factors are positively associated with LBP among nurses in Hospital Sultan Abdul Aziz Shah (HSAAS).

Objectives: The general objective of the research is to determine the factors associated with LBP among nurses in Hospital Sultan Abdul Aziz Shah (HSAAS).

Methods: A cross-sectional study with stratified random sampling were used for this study. There were 283 participants from 9 departments were selected through coin toss method; and only 150 respondents answered. Data Analysis: The associations between independent variables with LBP were determined using Pearson Chi-Square and Fisher's Exact Test; $p<0.05$ will be considered as statistically significant.

Results and Discussion: Prevalence of LBP among nurses in 9 departments in HSAAS is 72.7% as there were 109 out of 150 respondents has LBP. The results shown there were significant association between low mood ($p=0.002$), stress ($p=0.003$), current position ($p<0.001$), work overtime ($p<0.001$), history of backpain before nursing profession ($p=0.009$), frequency of bending or leaning forward ($p=0.003$), duration of carrying ($p=0.002$), maximum weight lifted ($p<0.001$), workload level ($p<0.001$), number of patients per shift ($p=0.003$), number of patients requires assisted mobilizing ($p=0.002$), additional hours of working per month ($p<0.001$), total time spent bending or leaning forward ($p<0.001$), total time spent carrying ($p<0.001$) factors and the presence of LBP.

Conclusion: The result obtained showed that majority respondents had LBP 72.7% and these findings can used for the healthcare to develop the most effective interventions to lower the prevalence of LBP among nurses as without LBP nurse's health, quality of life, work satisfaction can be improved, and best care can be provided for clients.

Keywords: Low back pain, Factors, Nurses.

SECTION D

CURRENT EVIDENCE

This section highlight latest updates on scientific evidence includes the summary and analysis of already existing research. Its information and research selected from the best available sources to support a decision making.

"The bad news is the time flies. The good news is, you are the pilot"

Key points Identifying and Managing Missing Data and Outliers in Clinical and Health Sciences Research Hybrid Seminar

Summarized by Nur Aazifah by Ilham, CRU HSAAS
Reviewed by by Prof Karuthan , UCSI

What is missing data?

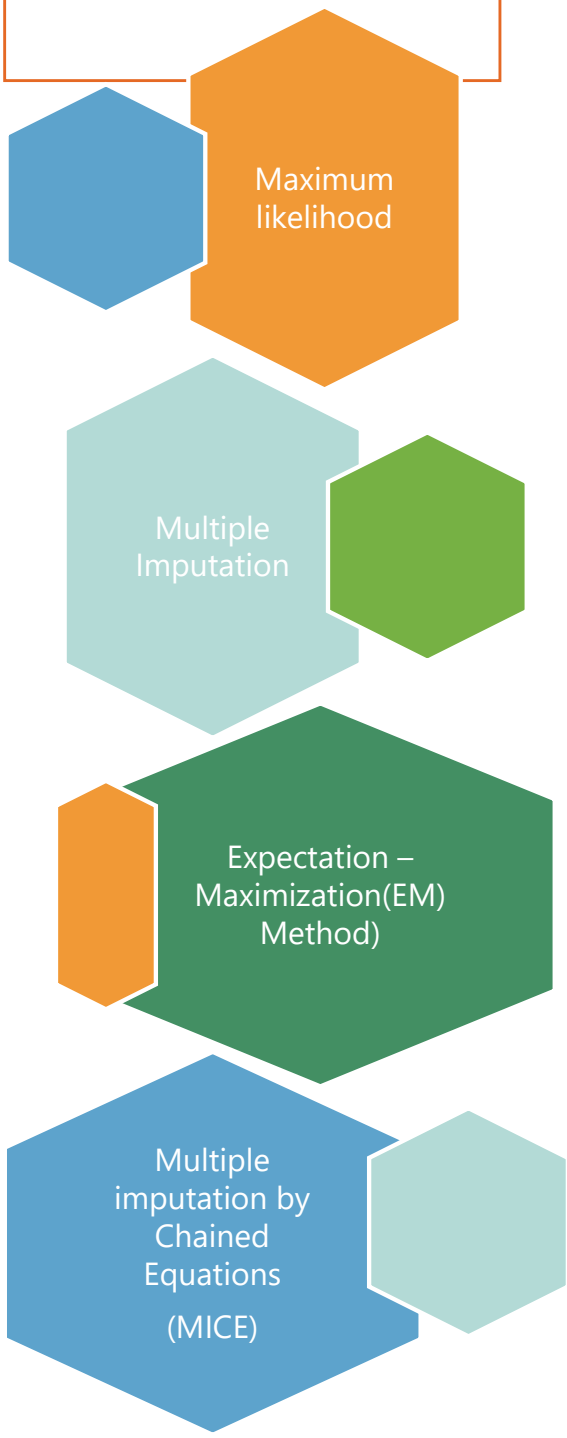
Missing data, or missing values, occur when we do not have data for certain variables or participants. It can be due to incomplete data entry, equipment malfunctions, lost files, etc. Missing data are errors because your data does not represent the true values of what you set out to measure. The reason for the missing data is important to consider because it helps you determine the type of missing data and what you need to do about it.

What are the types of missing data? There are three types which are summarized in the table below.

Missing Completely At Random (MCAR)	Missing at Random (MAR)	Missing not at Random (MNAR)
There is **no relationship** between the **missingness of the data and any values, observed or missing**. Those missing data points are a **random subset of the data**. There is nothing systematic going on that makes some data more likely to be missing than others $P(M \mid X_{miss}, X_{obs}) = P(M)$ M = missing indicator (1=missing, 0=non-missing) X_{miss} = missing value X_{obs} = observed value Example: The machine was not working, the lab sample was not placed in cold storage Implication: Dropping missing values will reduce power and precision	There is a **systematic relationship between the propensity of missing values and the observed data, but not the missing data**. Whether an observation is missing has nothing to do with the missing values, but it does have to do with the values of an individual's observed variables. $P(M \mid X_{miss}, X_{obs}) = P(M \mid X_{obs})$ Examples: 1) If men are more likely to tell you their weight than women, weight is MAR 2) Older people are more likely to answer a question on income than the younger ones	There **is a relationship between the propensity of a value to be missing and its values.** $P(M \mid X_{miss}, X_{obs}) = P(M \mid X_{miss}, X_{obs})$ It is called "**non-ignorable**" because the missing data mechanism itself must be modelled. There are no easy ways of dealing with this type of missing data. **Data collection process needs to be checked when missing not at random**. Examples: 1) People with the lowest education are missing on education. 2) The sickest people are most likely to drop out of the study.

How to handle missing data?

There are many way to handle missing data such **case deletion**, **single imputation** and more complex method of imputation such as :



Listwise deletion

The cases with a missing value on at least one of the variables are deleted. This restricts analyses to individuals with full observed data. This is not good as this assumes missing is MCAR. Hence it leads to biased and under-powered results

Pairwise deletion

The statistical procedure uses case that contain some missing data. The procedure cannot include a particular variable when it has a missing value, but it can still use the case when analysing other variables with non-missing values It allows more data to be analysed. However, there will be an issue when correlations are computed using different subset of cases.

Single Imputation

1. Using sample **mean:** the missing value as the average of the observed values.
2. **Regression prediction**: the missing value is imputed based on a trend value
3. "Hot-Deck": find **cases with the same** observed values on other variables and then choose one randomly
4. Predictive matching: this combines methods (2) and (3)
5. Use a dummy variable, with values of 0 and 1 for missing and non-missing and use this variable in the model.
6. **Intention to treat (ITT)**: last observation carried forward
7. **Modified intention to treat (mITT)**: only consider cases with at least two observations

Note that the goal of missing value analysis is not to get correct predictors of missing values, but to obtain accurate parameter estimates.

Maximum Likelihood

- Maximum likelihood (ML) is a statistical approach used to estimate the values of model parameters that make the observed data most probable under the chosen model. These estimated values are called ML estimates and are used to make inferences about the population from which the data were collected.
- ML estimates are obtained by maximizing the likelihood function, of the model parameters that measures how well the model fits the observed data.
- The likelihood function is a probability density function that describes the probability of observing the data given the model parameters.
- This method uses observed values but considers the missing values as well.
- Cases are usually weighted by the inverse probability of response.
- ML approach is often used to deal with attrition.

Multiple Imputation

- Missing values are filled multiple times by creating multiple “complete” data sets.
- Analyses are done separately on each data set and then the results are combined across the data sets
- It takes into account the uncertainty in the imputations.
- Total variance as a function of the within-imputed variance and between-imputed variance are used
- Once the missing values are imputed, the same data can be used for many analyses

EM-Method

- Each iteration consists of an E step and an M step.
- The E step finds the conditional expectation of the "missing" data, given the observed values and current estimates of the parameters.
- These expectations are then substituted for the "missing" data.
- In the M step, maximum likelihood estimates of the parameters are computed as though the missing data had been filled in.
- "Missing" is enclosed in quotation marks because the missing values are not directly filled in, but the functions of them are used in the log-likelihood.

MICE

- a.k.a “Fully conditional specification” or “Sequential regression multiple imputation”
- It fits model of each variable, conditional on all other variables
- Model used depends on type of variable (continuous/binary/ ordinal)

RECRUS Res.Newsl.Sept 2023;Vol. 3, Issues 24:Page 781.CSTR:https://cstr.cn/33294.43.032423.RECRUS.9

OUTLIERS

WHAT ARE OUTLIERS?

- In data analytics, outliers are values within a dataset that vary greatly from the others —they are either much larger, or much smaller.
- Outliers may indicate variabilities in a measurement, experimental errors, or a novelty.
- Outlier can mislead the regression result as it can pull the regression line towards itself.
- **In data analysis, outliers can cause anomalies in the results obtained.**
- **This means that they require some special attention and, in some cases, will need to be removed to analyze data effectively.**
- **There are two main reasons why giving outliers special attention is a necessary in data analytics process:**
    - Outliers may have a negative effect on the result of an analysis
    - Outliers—or their behavior—may be the information that a data analyst requires from the analysis

How do outliers end up in datasets?

1) Human error while manually entering data, such as a typo.
2) Intentional errors, such as dummy outliers included in a dataset to test detection methods.
3)Sampling errors that arise from extracting or mixing data from inaccurate sources.
4)Data processing errors that arise from data manipulation, or unintended mutations.
5)Measurement errors because of instrumental error.
6)Experimental errors, from the data extraction process/experiment planning/execution.
7)Natural outliers which occur “naturally” in the dataset, as opposed to being the result of an error otherwise listed. These naturally occurring errors are known as novelties.

What is the consideration before you remove the outliers?

It may seem natural to want to remove outliers as part of the data cleaning process. But sometimes it’s best—even necessary—to keep outliers in your dataset. Removing outliers solely due to their place in the extremes of your dataset may create inconsistencies in your results. These inconsistencies may lead to reduced statistical significance in an analysis.

WHAT ARE THE TYPE OF OUTLIER?

In general, they can be divided into two types:

•Univariate outlier

- ❑ It is an extreme value that relates to just one variable.
- ❑ Example : Sultan Kosen is currently the tallest person alive (2.51m).
- ❑ This case would be considered a univariate outlier as it's an extreme case of one factor : height.

• Multivariate outlier

- ❑ It is a combination of unusual values for at least 2 variables.
- ❑ Example: in a group of adults, one person is 2 m tall and weighs 100kg
- ❑ **If we consider his height alone, he may be in the 'usual' range.** And if we consider his weight alone**, he may be in the 'usual' range too.**
- ❑ However, when you consider these two observations in conjunction, you have an adult 2 m tall and weighs 100kg being **a 'surprising'** combination. That's a **multivariate outlier!**

How can you identify outliers?

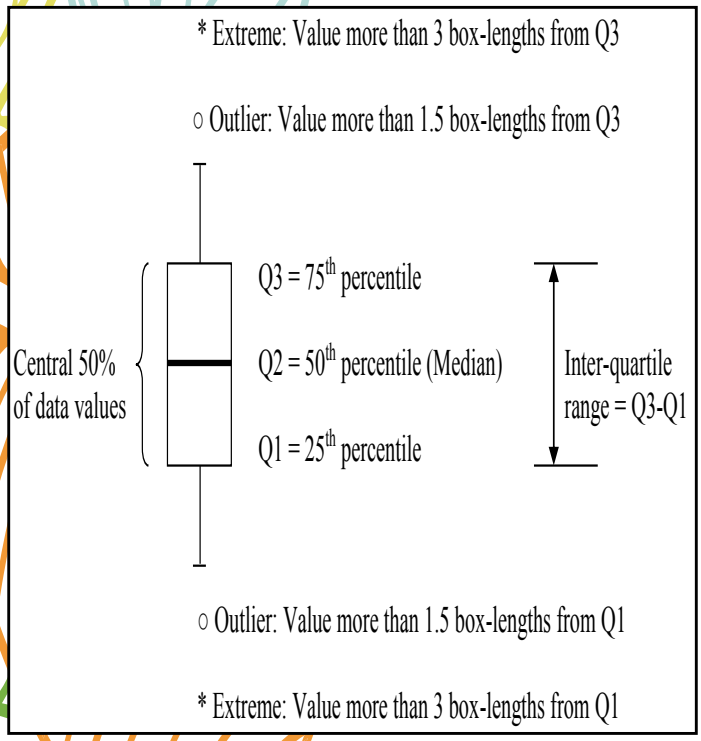
With small datasets, it can be easy to spot outliers manually

For example, for 28, 26, 21, 24, 78, you can see that 78 is the outlier

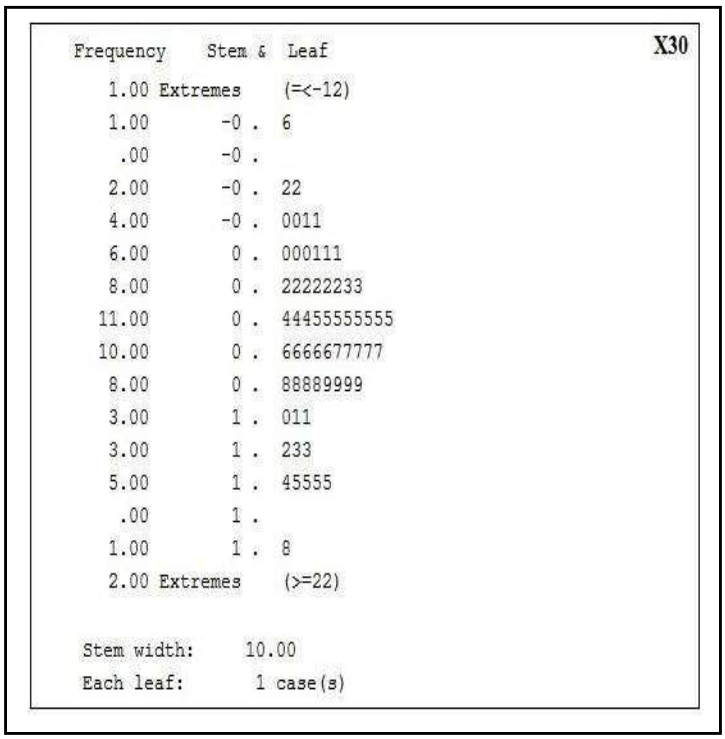
But when it comes to large datasets or other tools are required.

For univariate outlier

Box plot



Stem & Leaf



Frequency	Stem &	Leaf	X30
1.00	Extremes	(=<-12)	
1.00	-0 .	6	
.00	-0 .		
2.00	-0 .	22	
4.00	-0 .	0011	
6.00	0 .	000111	
8.00	0 .	22222233	
11.00	0 .	44455555555	
10.00	0 .	6666677777	
8.00	0 .	88889999	
3.00	1 .	011	
3.00	1 .	233	
5.00	1 .	45555	
.00	1 .		
1.00	1 .	8	
2.00	Extremes	(>=22)	

Stem width: 10.00
Each leaf: 1 case(s)

How about multivariate outlier?

There are many method to detect multivariate outlier such as regression method, distance-bases, density based and clustering bases. Here we will focus on distance-base.

Mahalanobis:

- Measure of how much a case's values on the IVs differ from the average of all other cases.
- This distance has a chi-square distribution with *p* (#IVs) degree of freedom.
- Threshold values are based on a 0.001 level of significance.

Cook's:

- Measure of how much the residuals of all cases would change if a particular case were excluded from the calculation of the regression coefficient.
- A large Cook's D indicates that excluding a case from computation of the regression statistics changes the coefficients substantially.

Leverage values:

- Measures the influence of a case on the fit of the regression.
- The centered leverage ranges from 0 to (n-1)/n, where n is the sample size.
- A value of 0 indicates that the case has no influence at all on the fit.
- The larger the leverage value the larger is the influence of the case on the fit.

What is robust method to handle outlier?

1) Winsorization
2) Robust Regression

Winsorization is the transformation of statistics by limiting extreme values in the statistical data to reduce the effect of possibly spurious outliers.

- A typical strategy is to set all outliers to a specified percentile of the data;
- Example, a 90% winsorization would see all data below the 5th percentile set to the 5th percentile, and data above the 95th percentile set to the 95th percentile.
- Winsorized estimators are usually more robust to outliers than their more standard forms, although there are alternatives, such as trimming, that will achieve a similar effect.

Robust regression seeks to overcome some limitation of traditional regression analysis. It reduce the impact of outlier, violation of distribution assumption and heterogeneity in variance.

Regression with outliers vs without outliers vs robust regression

With outlier n= 108

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	120.560	2.734		44.091	<.001
	Tryglyceride	2.915	.833	.322	3.501	<.001

a. Dependent Variable: Systolic BP

Without outlier n= 105

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	116.418	3.009		38.695	<.001
	Tryglyceride	4.724	1.016	.417	4.652	<.001

a. Dependent Variable: Systolic BP

$$Change\ in\ slope = 4.724 - 2.915 = 1.809$$

With Robust regression

Coefficients

	Value	Std. Error	t value
(Intercept)	119.400	2.824	42.274
TG	3.063	.860	3.561

rlm(formula = SBP ~ TG, data = dta, na.action = na.exclude, method = "MM", model = FALSE)
Residual standard error: 13.66880
Degrees of freedom: 106

$$Change\ in\ slope = 3.063 - 2.915 = 0.148$$

Recording of the hybrid webinar is available. If you are interested to watch the interesting session including SPSS demonstration by Prof Karuthan please contact cru at cru_hsass@upm.edu.my.

DATA MANAGEMENT WITH REDCap : INSIGHTS FOR RESEARCHER

Summarize by Nur Aazifah (CRU HSAAS), Reviewed by Abqariyah Yahya (UM)

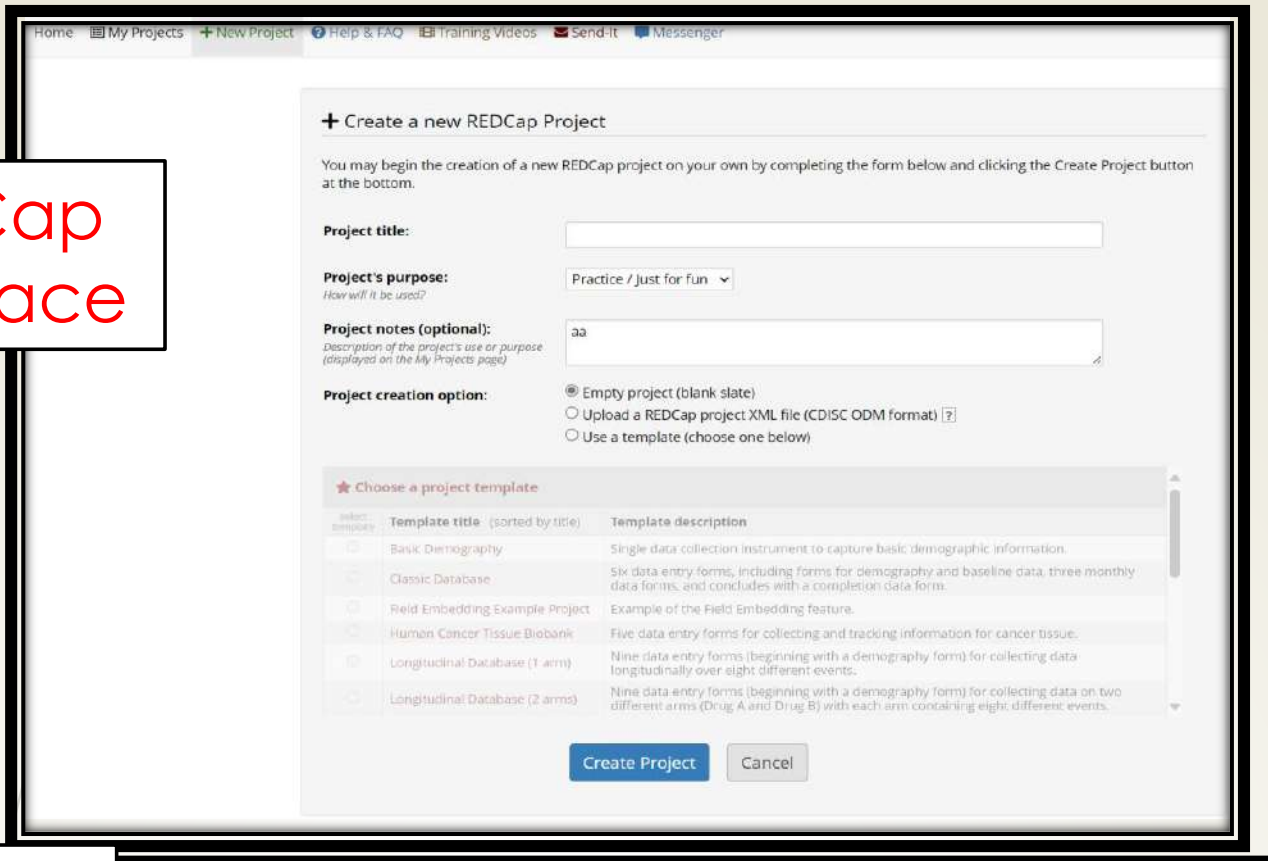
What is REDCap? Research Electronic Data Capture (REDCap) developed by informatics teams at Vanderbilt University. It is a secure web application for building and managing online surveys and databases. The databases use instruments such as surveys and forms as research capture tools. Projects are self-sufficient and secure databases that can be used for normal data entry or for surveys across multiple distinct time points. It helps in collecting data and exporting it to statistical programs and other data analysis software.

Why it is important to have a good data management

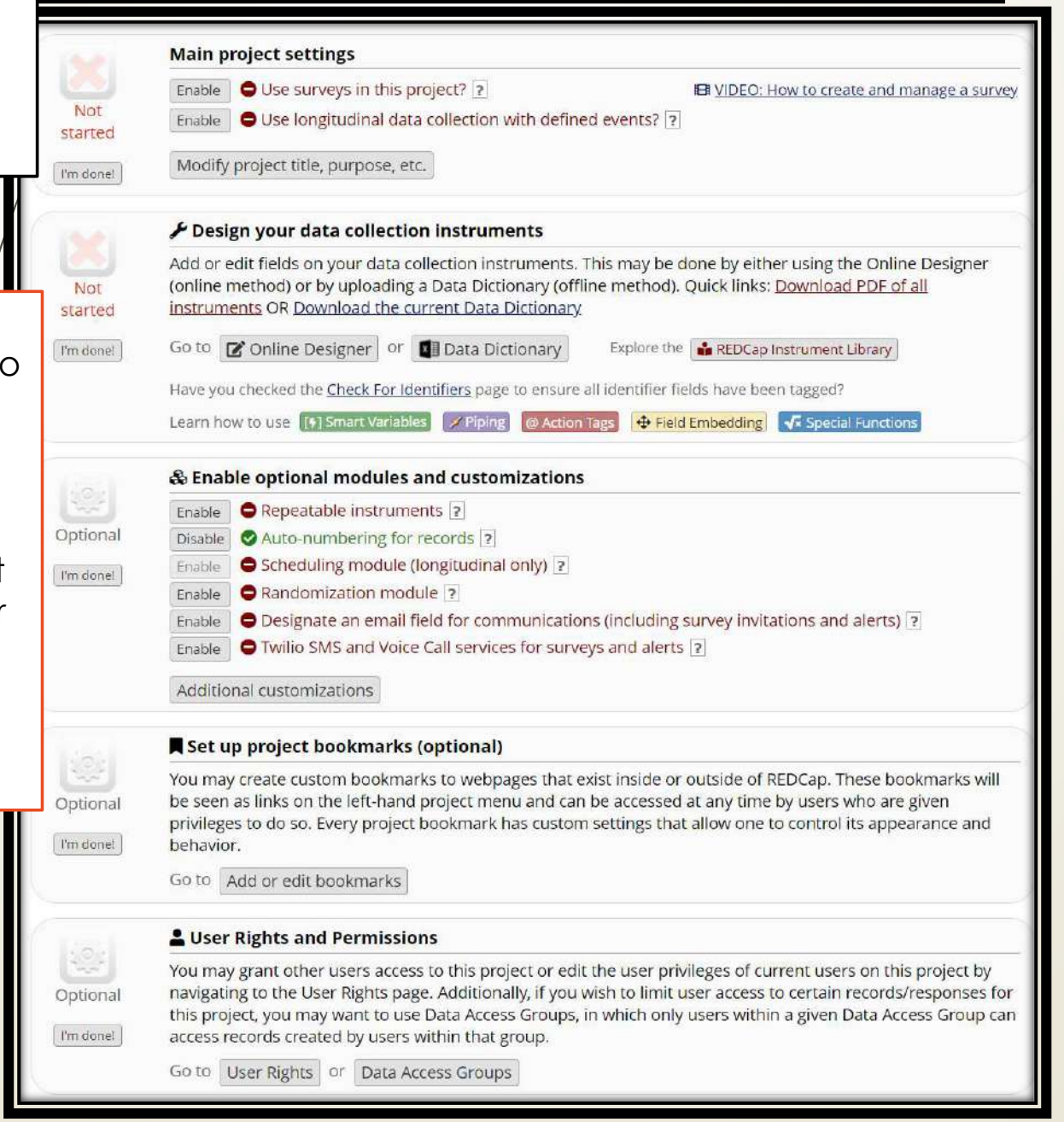
- Facilitates sharing of research data. In many fields, there is growing emphasis on sharing and open science. Effective data management will make it easier for collaboration to happened between institution and researcher. This promotes transparency and reproducibility in research
- Back up and archive. Data loss is a catastrophic for research projects. Effective data management includes regular data backups and archiving
- Prevent errors and increase the quality of analysis. High quality data will lead to a meaningful and trustworthy result.
- Good data management not only about organizing and effectively storing the data but also about ensuring the quality, security and accessibility is at the top notch. It underpins the credibility and reliability of research and helps policy makers make inform decision based on data-driven insight.
- Saves time and resources in the long run. Researcher can quickly locate and access data when needed reducing the time spent searching or recreating data. This will improve the productivity.
- Privacy, consent, intellectual property and security issue. Proper data management will include protocols for handling sensitive , confidential data. Consent from participant as well as address the security concerns to prevent data breaches or unauthorized access which might have legal implications

Why choose REDCap over Excel or Access?

REDCap interface

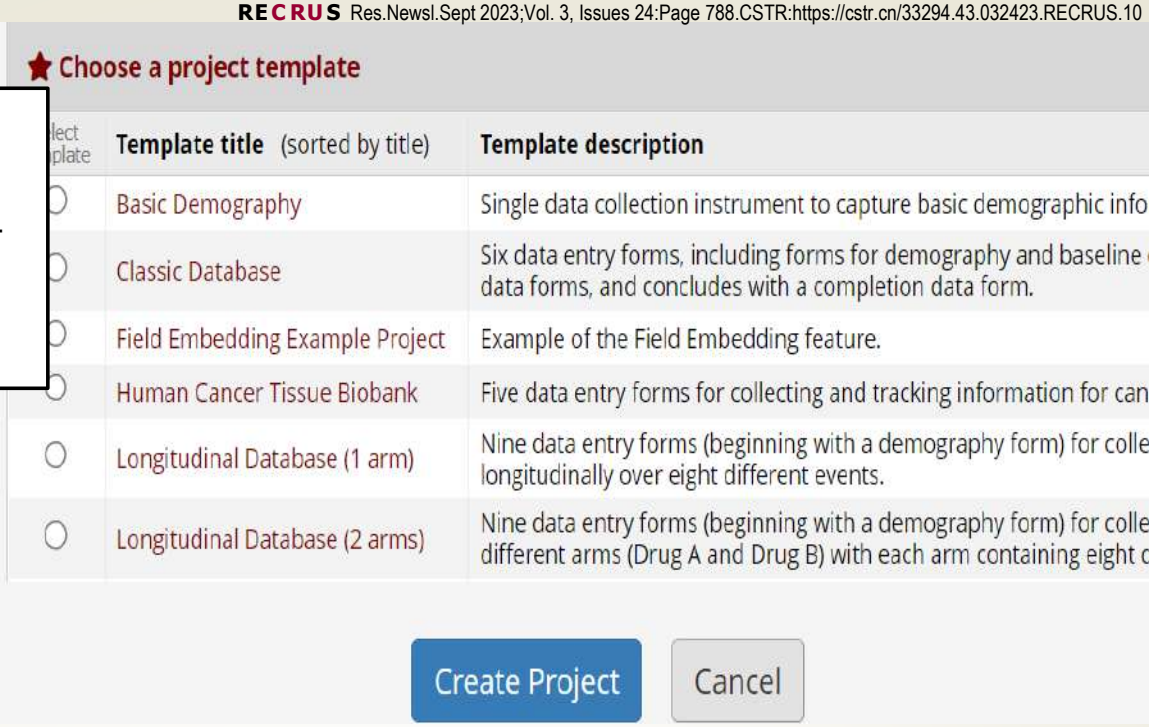


Project setup checklist

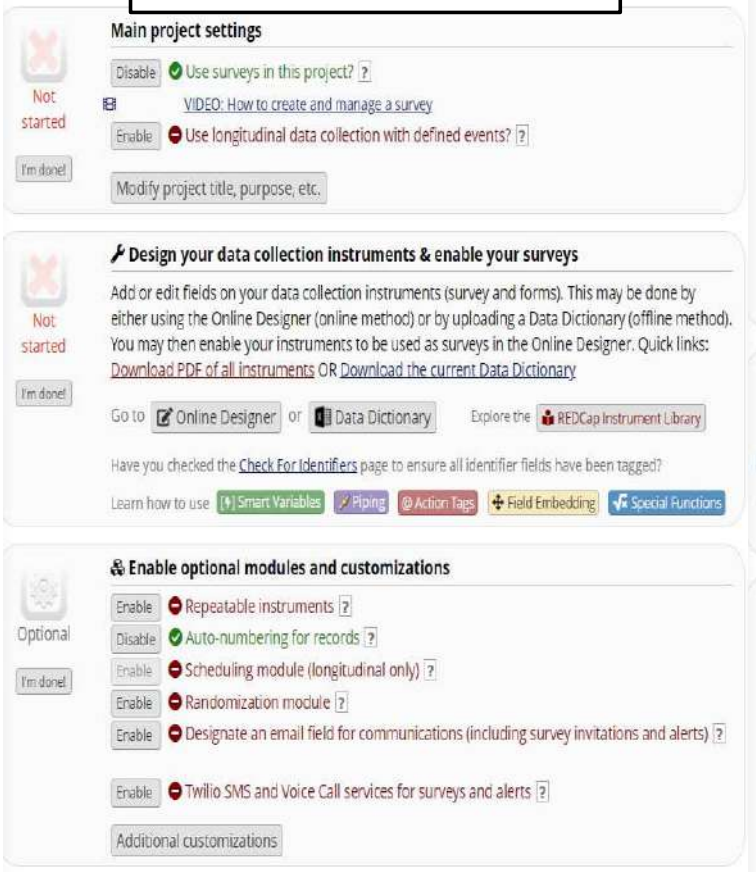


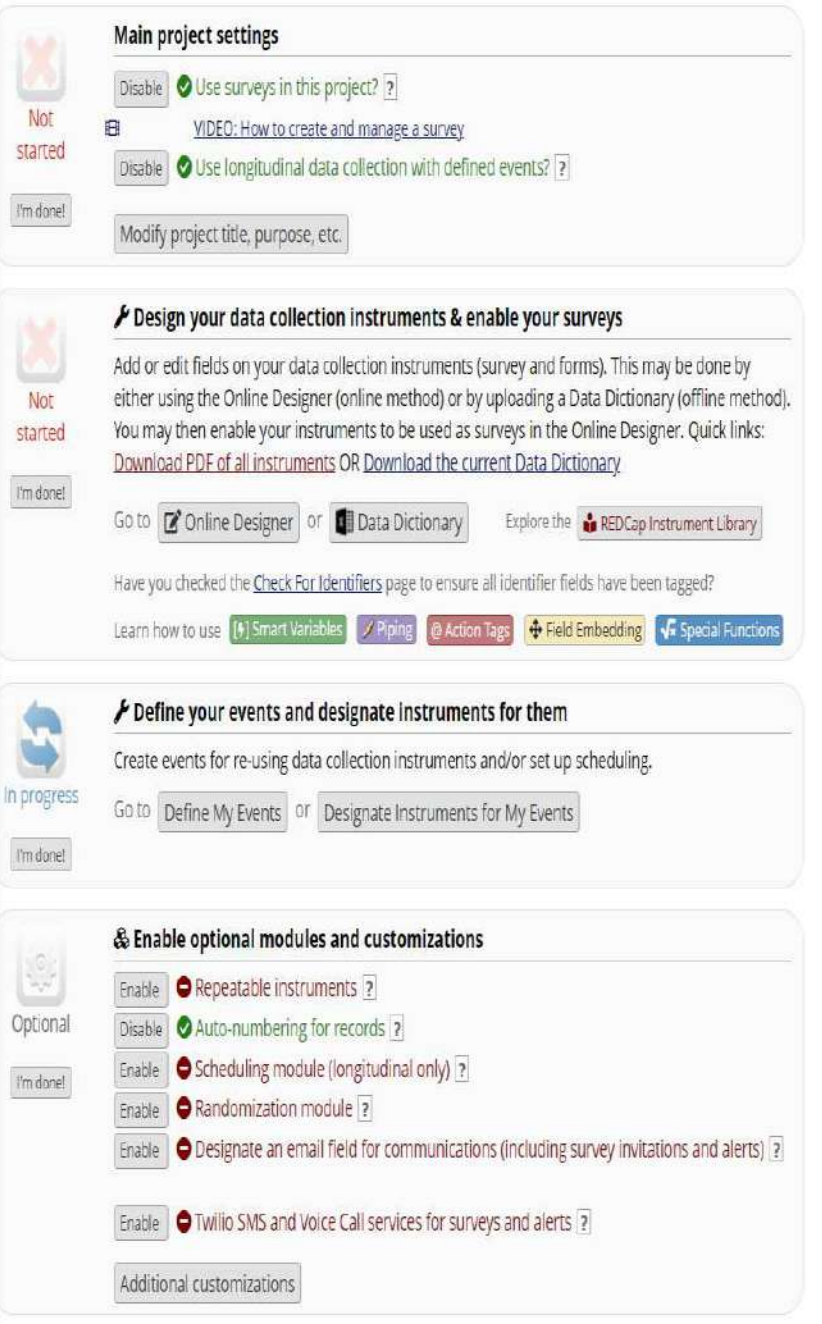
- Provides a general to do list during project creation
-Select the main project setting either to do a survey or longitudinal project.

Several default **templates** are available. Project can be modifies once created.



Project setup is different between survey and longitudinal study. Longitudinal study has option to define the events.





Video recording for Data Management with REDCap is available. To access the video recording please reach us at cru_hsaas@upm.edu.my

Key Points:
Hybrid Seminar

COLLABORATION & NETWORKING *in* CLINICAL RESEARCH

SPEAKERS:
PROF. DATIN DR. SHERINA MOHD SIDIK, PROF. DR. ZAMBERI SEKAWI & ASSOC. PROF. DR. CHEW BOON HOW

Article by: Nurfaizah Saibul

WHY COLLABORATION AND NETWORKING IN CLINICAL RESEARCH IS IMPORTANT?

Assoc. Prof. Dr. Chew Boon How
Head, Clinical Research Unit, HSAAS

Benefits of collaboration

- Provides access to resources (funding, facilities, and ideas).
- Rapid spread of knowledge.
- Drives research forward.
- High citation for collaborative papers.

Benefits of teamwork

- Team networking is benefit for early career researchers.
- Early career researcher should be able to:
  - Find a mentor.
  - Working in a team.. less in silo.
  - Participate in a large research project and learn from others.
  - Improve social and communication skills to build networking with other researchers and funders.

How to collaborate?

Think about international, online, intersectoral, interdisciplinary and multidisciplinary.

"... staying aligned in one research direction, long-term exposure to a diverse group of researchers, and early mentorship helped the researchers to attain their achievements..."

Key Points:
Hybrid Seminar

COLLABORATION & NETWORKING *in* CLINICAL RESEARCH

HOW TO BUILD AND INCREASE RESEARCH COLLABORATION AND NETWORKING?

Prof. Datin Dr. Sherina Mohd Sidik
Department of Psychiatry,
Faculty of Medicine and Health Sciences,
UPM

Identify the key people in your area of specialty/ research interest:

- **Supervisors**- stay connected
- **Colleagues**- internal and external - supportive network
- **Authors from publications in the same areas of specialty/ research.**

Join committees/ associations (national and international) in your area of specialty/ research interest

Accept invitations for collaborations- research academia and clinical work

But must be careful.

Choose your collaborator/s wisely!

Work with your students

Keep updated with the new knowledges learned by the students.

Always try to publish in journals which can reach a wide audience in your field.

Present your work in conferences, seminars, workshops etc.

To connect with others.

Key Points:

Hybrid Seminar

COLLABORATION & NETWORKING *in* CLINICAL RESEARCH

TIPS TO ENHANCE COLLABORATION AND NETWORKING IN CLINICAL RESEARCH

Prof. Dr. Zamberi Sekawi
Department of Medical Microbiology,
Faculty of Medicine and Health Sciences, UPM

- Grab Opportunities- Never Say No!
- Promoting your expertise- Presents your research works at conferences- Make new collaborators especially with researchers from other countries.
- Work with highly reputable organizations (e.g. WHO) to get more exposure and networking at the international level.
- Expand your networking through association/ society to enhance collaboration.
- Establish good rapport with potential collaborators (Visit, meeting etc.)
- Always looking for impactful collaboration for impactful research and outcomes.
- Emphasize on multidisciplinary collaboration and engaged related stakeholders in the research.
- Build trust and bonding with collaborators to sustain collaboration.

What is a Decentralized Clinical Trials?

CURRENT EVIDENCE!!

https://www.jacc.org/doi/full/10.1016/j.jacbts.2021.01.011

By Salwana Ahmad, BH Chew

"Decentralized Clinical Trials:"
also termed "direct-to-participant trials" or "virtual" studies.

A separate side-effect of the pandemic has been the swift adoption of virtual interactions between physicians and patients to provide continuity of care while maintaining social distancing. This comes at a time of rapid advancement of technology permitting those interactions, such as enhanced internet connectivity, electronic health records, real-time video conferencing, smartphone health applications, and remotely connectable health monitoring devices that are becoming more accurate, practical, and affordable. Interest in decentralized clinical trials (DCTs) that use "virtual elements" like these has grown in parallel with acceptance of "virtual medicine," accelerating shifts in clinical trial design that many feel are long overdue." The concept of blockchain technology for healthcare applications and clinical trial data management is also briefly discussed.

Advantages of DCTs:

Logistics and accessibility
DCTs improve logistics by enhancing:
- ✓ Subject recruitment and retention
- ✓ Remote monitoring and data collection
- ✓ Minimize obstacles to participants (travel costs, job absences, and medical comorbidities).

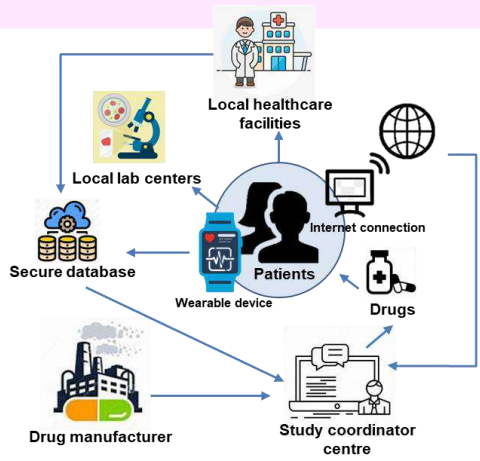
Individualized treatment effects
Development of individualized thresholds for measuring treatment effects.:
- ✓ Smaller studies
- ✓ Small sample sizes.

Precise assessment for treatment outcomes:
- ✓ Wearable devices provide more accurate, timely, and comprehensive real-time data.

Consistencies in trial management
Decrease site-specific inconsistencies:
- ✓ Redundant applications, ethical submissions, and costs.

Remote patient/subject interaction:
- ✓ Occurs more frequently/at times
- ✓ Convenient locations for subjects,
- ✓ Improving compliance.
- ✓ Enhancing study safety.

DCTs rely on virtual tools and automation:
- ✓ Require smaller investigative teams
- ✓ Lower costs to sponsors.



Adapted from Gail A. Van Norman et al. *J Am Coll Cardiol Basic Trans Science* 2021; 6:384-387.

Challenges of DCTs:

Drug distribution and management:
DCTs require shipping drugs to multiple coordinating sites, including potentially directly to patient homes:
- ✓ Drug stability, appropriate storage facilities, prevention of unauthorized access, and timely refills.

Technological challenges:
DCTs rely on technological advancements, such as wearable biometric devices, which are still in the early phases of development and require clinical validation.

Technical support and infrastructure:
Limited support and facility in remote locations or home:
- ✓ without internet connectivity
- ✓ Unavailability of technical support, troubleshooting, batteries, transmission methods, and internet infrastructure, which may be.

Patient privacy and cybersecurity:
Protecting patient privacy stored on connected devices and ensuring the security of transmitted information is a challenge in DCTs. Reliable cybersecurity systems are necessary to store and transmit private patient data securely

The Evolving Role of Decentralized Clinical Trials and Digital Health Technologies.

Q & A

CDER Conversations HERE

Interviews with CDER experts on priorities, projects, and initiatives

1. What are decentralized clinical trials and digital health technologies?

Location

- Clinical trial activities occur at locations other than a traditional clinical trial site.
- E.g. Participant's home, a local health care facility, or a nearby laboratory.

Use digital health technologies (DHTs)

- Use systems that capture health care information directly from individuals to the investigators.
- DHTS: e.g. activity trackers, glucose monitors, blood pressure monitors, or spirometers.
- Can be wearable, implantable, or ingestible.

2. Why are DCTs and DHTs becoming a larger component of the clinical trial landscape?

Advancement of available technologies

- Easier to collect, transfer, and store electronic data.
- Use of telemedicine to improve associated travel restrictions and physical distancing precautions.
- Improving recruitment and retention rates.
- DHTs enable frequent and continuous data collection,
- DCTs can reduce the time and expenses associated with traditional clinical trial sites.

3. We hear a lot about the underrepresentation of racial and ethnic minority populations in clinical research. How might DCTs and DHTs be part of the answer?

Reducing barriers to participation by these:

- ❑ **Traveling** - Older individuals and people with disabilities
- ❑ **Scheduled time** - People with household and childcare responsibilities
- ❑ **Clinical research facilities** - individuals from racial and ethnic minority groups.

4. We've discussed the benefits of DHTs and DCTs. What are the challenges?

Implementation challenges in transitioning to a digital clinical trial space

- ❑ e.g. storing electronic data securely, transporting treatments safe, data management skills, and data management platforms.

Technical hurdle:

- ❑ People uncomfortable with wearable sensors, without access to technology, or unfamiliar with electronic instruments may opt out of participating.

5. What is the FDA doing to address these challenges and continue the conversation about DCTs and DHTs?

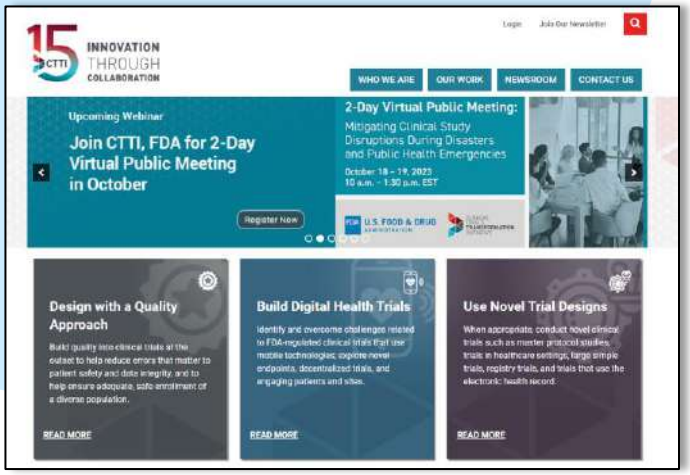
- ❖ Support for development
- ❖ Guidance
- ❖ Digital development
- ❖ Stakeholder engagement

READ MORE HERE!

6. How do we expect DCTs and DHTs to evolve?

Hybrid models, where some trial activities take place at clinical trial sites and others at patients' homes or other convenient locations, are expected to be more common than entirely remote settings for clinical trials.

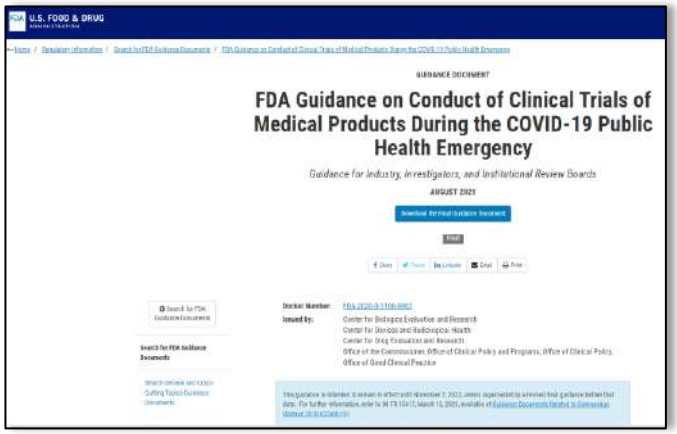
More information related to decentralized Clinical Trial



Clinical Trials Transformation Initiative. "CTTI recommendations: decentralized clinical trials". September2018. Available at: [Clinical Trials Transformation Initiative (CTTI)]

[Decentralized Trials and Research Alliance (DTRA)]

"On December 10, 2020, the Decentralized Trials and Research Alliance (DTRA) was launched, bringing together more than 50 international organizations, including the FDA and patient advocacy groups, to promote DCT methods."
"The Decentralized Trials & Research Alliance enables collaboration of stakeholders to accelerate the adoption of patient-focused, decentralized clinical trials and research within life sciences and healthcare through education and research. Our vision is to make research participation accessible to everyone, enabled by the consistent, widespread adoption of appropriate decentralized research methods."



U.S. Food and Drug Administration. "FDA guidance on conduct of clinical trials of medical products during COVID-19 public health emergency". Available at:[FDA Guidance on Conduct of Clinical Trials]

Remote trial in which no in-person site visits occurred. Internet recruitment, online questionnaires, electronic diaries, and home delivery of the investigational drug were used to conduct the study by the study investigators. Available at: [REMOTE Trial]

ANNOUNCEMENTS

- MJH Series 21. 27th October 2023. 10.30 – 11.45am.
- Research Colloquium series 3/23. Psychological Health Among Caregivers of Stroke Patients in HSAAS. 11 Oct 2023, 1400 – 1515.
- The Decentralized Trials & Research Alliance (DTRA) Annual Meeting Nov 5-8 in Boston.
- 23rd FERCAP International Conference
- 8th World Conference on Research Integrity (Hybrid), 2-5 June 2024, Athens, Greece.
- Introduction to Decentralized Clinical Trials (DCTs). An online course by the Association of Clinical Research Professionals (ACRP).
- Wellcome Trust Funding Opportunities
- Opportunities for collaborative research in Horizon Europe: Energy, Climate Action & Mobility
- Data Science Training -- CODATA Data Science Training list
- International Data Week (IDW)
- Applications Now Open for the 2024 SEEKCommons Fellowship
- Good Clinical Practice. Series 3/2023. 14 – 16 November 2023
- BMJ Case Reports Journal Subscription by Dept. of Psychiatry

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هوسفيتل سلطان عبد العزيز شاه

CLINICAL RESEARCH UNIT PRESENTS

META-JOURNAL HOUR

FULL ARTICLE

Prevention of non-ventilator-associated hospital-acquired pneumonia in Switzerland: a type 2 hybrid effectiveness-implementation trial

Click to access full article:
https://pubmed.ncbi.nlm.nih.gov/36893785/

27TH OCTOBER 2023 (FRIDAY) | 10.30 – 11.45AM | GOOGLE MEET

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or scan the QR code below:

Brought to you via:

Google Meet

https://meet.google.com/aav-oyyg-meu

Speaker

Ms. Nurfaizah Saibul
Research Officer, CRU

Free registration to all UPM/ HSAAS staff, students and public

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

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HSAAS
HOSPITAL SULTAN ABDUL AZIZ SHAH

RESEARCH COLLOQUIUM

Series 3/2023

Title: Psychological Health Among Caregivers of Stroke Patients in HSAAS

Speaker

MS. NUR AYUNI BINTI MOHD SAID

Project supervised by

DR. RUTHPACKIAVATY A/P RAJEN DURAI
Department of Nursing, HSAAS

2:00PM – 3:15PM

11 OCTOBER 2023

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HSAAS
HOSPITAL SULTAN ABDUL AZIZ SHAH

RESEARCH COLLOQUIUM

Series 3/2023

Title: Psychological Health Among Caregivers of Stroke Patients in HSAAS

PROGRAM TENTATIVE

TIME	AGENDA
2.00PM – 2.10PM	Opening ceremony and recitation of doa
2.10PM – 3.10PM	Project findings presentation Title: Psychological Health Among Caregivers of Stroke Patients in HSAAS
3.10PM – 3.15PM	Q&A session

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DTRA
DECENTRALIZED TRIALS & RESEARCH ALLIANCE

2023 ANNUAL MEETING

NOVEMBER 5TH-8TH BOSTON, MA

REGISTRATION

Registration Options

	Early	Advance	Regular	Final
	Through 6/30	7/1-8/31	9/1-9/30	10/1-11/5
Basic 4-Day Meeting Access Pass	$1795	$1995	$2295	$2495
Regular 4-Day Meeting Access Pass One-to-One Meetings	$2795	$2995	$3295	$3495

All Registrations Include the Option to Participate In-Person or Hybrid Virtual

- Access to DTRA Meeting App
  Live-Streaming of Event Recordings of Sessions
- Hybrid Networking
  One-to-One Meetings with Virtual and In-Person Attendees
- Messaging with Participants through DTRA Meeting App

Event Schedule

VIEW THE SCHEDULE

Registration

REGISTER TO ATTEND

For more information, read [HERE]

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FERCAP

23RD FERCAP INTERNATIONAL CONFERENCE 2023

ETHICAL RESEARCH PRACTICES RELATED TO INNOVATIVE RESEARCH: CHALLENGES AND OPPORTUNITIES

Hybrid:
Virtual & In-Person (Kuala Lumpur, Malaysia)

Pre-Conference:
26 November 2023
Conference:
27-29 November 2023

Deadline for Abstract Submission
31st of July 2023

Abstract Submission:
cristina.torres@yahoo.com

Registration Starts
30 April 2023

Registration link:

Local
tinyurl.com/fercaplocal

International
tinyurl.com/fercapintl

Hosted by the Universiti Malaya Medical Centre-Medical Research Ethics Committee (UMMC-MREC) in collaboration with

Universiti Malaya Research Ethics Committee (UMREC), Universiti Malaya

Clinical Investigation Centre (CIC), Universiti Malaya Medical Centre

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Faculty of Dentistry Medical Ethics Committee (FDMEC), Universiti Malaya

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WORLD CONFERENCES ON RESEARCH INTEGRITY

WCRI 2024

ATHENS GREECE

8th World Conference on Research Integrity

2-5 June 2024

Megaron Athens International Conference Centre (MAICC)

HELLENIC REPUBLIC
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INTRODUCTION TO DECENTRALIZED CLINICAL TRIALS (DCTS)

Gain the foundational knowledge clinical research professionals need to implement digital health components in clinical trials.

An online course by the Association of Clinical Research Professionals (ACRP)

Upon completion of this training program, participants should be able to:

- Explain DCT and how it applies to the future of clinical research.
- Demonstrate the most-common types of DCT approaches.
- Examine the advantages and challenges of DCT implementation.
- Analyze factors of consideration for incorporating DCT in clinical trials.
- Understand DCT tools and their possible implementation.

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GRANT FUNDING

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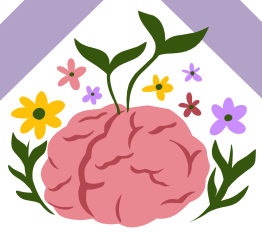
DISCOVERY RESEARCH



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Introducing the CODATA-RDA Schools of Research Data Science

The ever-accelerating volume and variety of data being generated is having a huge impact of a wide variety of research disciplines, from the sciences to the humanities: the international, collective ability to create, share and analyse vast quantities of data is having a profound, transformative effect. What can justly be called the 'Data Revolution' offers many opportunities coupled with significant challenges. High among these is the need to develop the necessary professions and skills. There is a recognised need for individuals with the combination of skills necessary to optimise use of the new data sets. Researchers and research institutions worldwide recognise the need to develop data skills and we see short courses, continuing professional development and MOOCs providing training in data skills and research data management.

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A FESTIVAL OF DATA

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2023
SALZBURG

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Applications Now Open for the 2024 SEEKCommons Fellowship

About SEEKCommons

The Socio-Environmental Knowledge Commons (SEEKCommons) project is dedicated to building pathways for horizontal collaborations across Science and Technology Studies (STS), Open Science (OS), and socio-environmental researchers and community organizers.

The SEEKCommons Fellowship is an initiative to bring graduates and early-career researchers with new perspectives and voices to socio-environmental research with open technologies. Our program is designed to:

- Encourage new integrative practices involving environmental and climate action research with OS practices; and
- Provide a space for fellows and network members to connect on research issues, challenges, and solutions.

We are seeking 9 fellows for the inaugural 2024 SEEKCommons Fellowship. More details below:

Applications Open	September 5-October 15, 2023
Successful Fellows notified	November 29, 2023
Fellowship begins	January 22, 2024
Fellowship ends	October 22, 2024

Priority Topics for Fellowships

Priority will be given to potential fellows with localized project focus. The datasets fellows work with should have significance to their community/partner communities.

- Open technologies for data management, formats, standards, protection, and sharing strategies;
- Creating/adapting tools or workflows to support the reuse of strategic datasets;
- Open Hardware instrumentation for socio-environmental projects;
- Open data and metadata curation for sharing, protecting, and preserving socio-environmental environmental project outputs;
- Developing FAIR Implementation Profiles (FIPs) for socio-environmental research for public benefit (with orientation of CARE principles);
- Beyond and alongside CARE, strategies / frameworks for addressing *process* as part of data use (which FAIR does not do);
- STS research on responses to OS institutional mandates, data protection and sharing practices, and commercialization of the sciences.

To encourage engagement with critical and emerging topics in socio-environmental research:

- One fellowship will be reserved for an indigenous STS fellow working on OS or Socio-Environmental issues;
- One fellowship will be reserved for a STS fellow working on AI and open environmental data.

Eligibility Requirements

In order to be eligible for this fellowship program, you must:

- Be currently enrolled in a graduate program, or hold a postdoctoral appointment, or be a professional practitioner working in a community-based organization;
- Demonstrate clear alignment with the goals and objectives of the SEEKCommons project. This will be assessed via your application materials.
- Of the nine fellowships offered in each cohort, at least one will be reserved for:
    - An indigenous STS fellow working on the priority topics listed above under “potential research topics”
    - An STS research fellow working on artificial intelligence (AI) and open socio-environmental data

Please review our SEEKCommons Fellowship FAQ for additional eligibility information.

Fellows’ Responsibilities

To successfully engage in the fellowship opportunity, fellows will be expected to:

- Be actively involved in fellow cohort activities including:
    - Participation in once-monthly virtual cohort meetings (total of 9);
    - Participation in at least 7 virtual workshops during the duration of the fellowship, with the option to join additional workshops;
    - Engagement with mentors during the process of design, implementation, and completion of the proposed project;
    - Participation in annual in-person SEEKCommons Network convening (travel funding provided).
- Work with SEEKcommons team and network members to curate content for the Resource Hub;
- Document research work through public, multimedia formats (i.e. blogs, video, social media) so the benefits of the fellowship are shared publicly and widely;
- Preparation of a final research product (i.e. peer-reviewed publication, software package, hardware project, white paper, website, data portal, conference poster/presentation). Post-docs will be required to pursue, at least, one peer-reviewed publication;
- Participation in *entry* and *exit* surveys conducted by the SEEKcommons team.

SEEKCommons Fellows will benefit from these offerings:

- Stipends: $8,000 graduates, $12,000 post-docs and professionals
- Mentorship from SEEKCommons project and network members
- Training in OS, STS, and Socio-environmental research topics

- Participation in virtual meetings and annual SEEKCommons convenings
- Access to computing infrastructure (via SEEKCommons Lab)
- Support for travel to one in-person SEEKCommons convening

Applications due by October 15, 2023
Read our FAQ to learn more or apply here.

SEEKCommons is a collaboration between partners at: University of Notre Dame, the Open Environmental Data Project, and The HDF Group. The project is made possible by a National Science Foundation FAIROS RCN grant (Award 2226425). This award was jointly supported by the NSF Directorate for Social, Behavioral and Economic Sciences and the Office of Advanced Cyberinfrastructure.

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or email to
seminar_medic@upm.edu.my

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Registration Dateline 29th October 2023

(Tentative Program will be sent through registered email)

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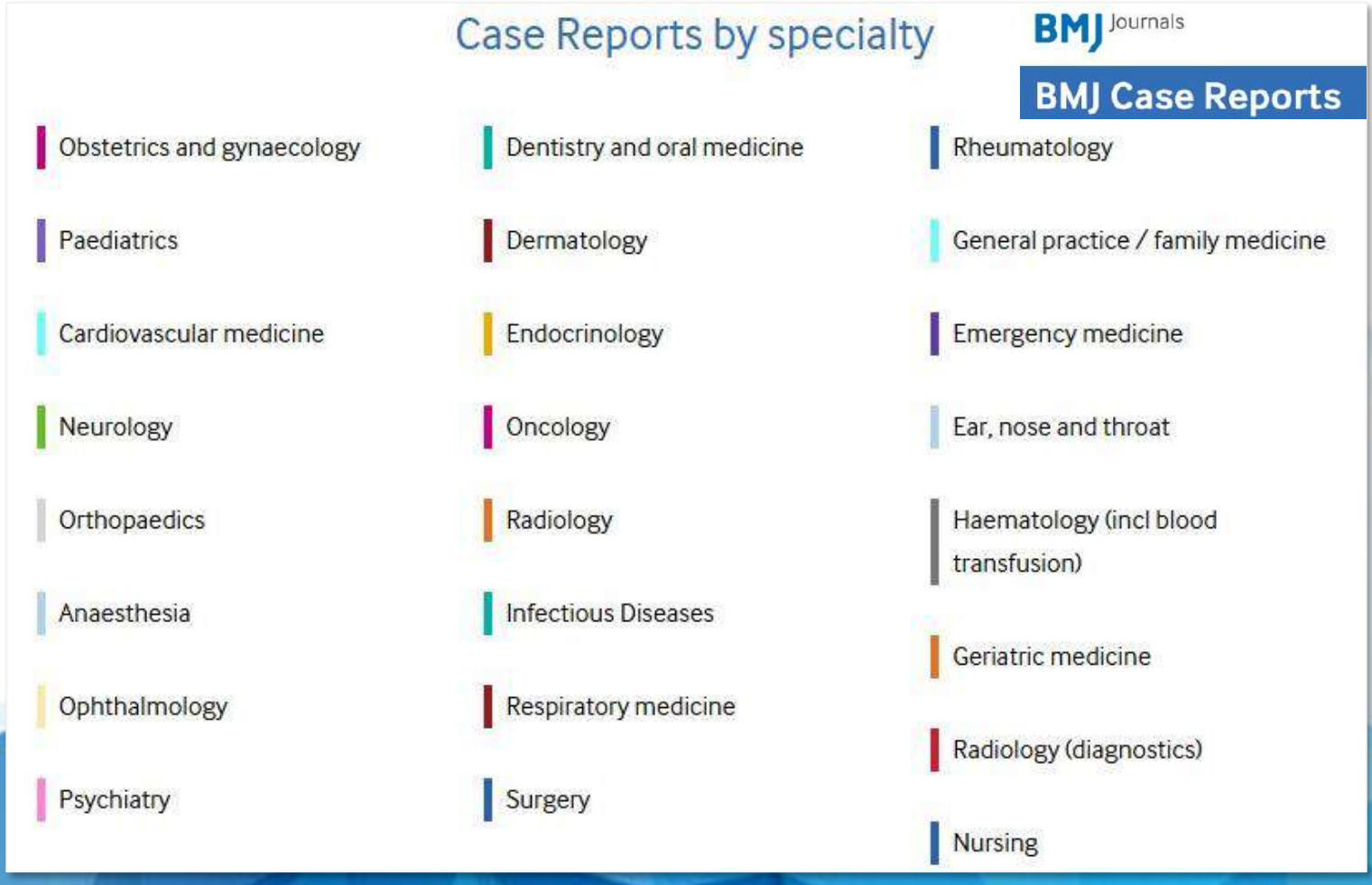
By: Dr. Ruziana Masiran
Department of Psychiatry

Dear Fellow Clinicians,

We are delighted to announce that the Department of Psychiatry has purchased an institutional fellowship from the BMJ Case Reports (BMJCR). The subscription period is from February 1st, 2023 to January 31st, 2024. Although the Department of Psychiatry has graciously purchased this fellowship for its department members – all faculty, staff and students in HPUPM and UPM also benefit from this membership. This includes the opportunity to submit the cases that we treat in HPUPM.

Owned by The BMJ (originally British Medical Journal), BMJCR is an online resource with a high volume of peer-reviewed cases in all disciplines. Healthcare professionals and researchers can easily find clinically important information on common and rare conditions. Therefore, all healthcare professionals are encouraged to submit their manuscripts to BMJCR for consideration. While rare and novel cases are appreciated, BMJCR highlights the educational values of the cases.

Prepared manuscripts can be submitted via the user-friendly BMJCRs' online submission site. The Word template of the full case report, images, and global health templates are provided. BMJCR has a strict policy on confidentiality and patient/caregiver consent forms. Upon submission, authors are required to select the category that matches their written case (e.g., adverse drug reactions, novel treatment including a new drug/ lifestyle/treatment intervention or the use of an established drug or procedure in a new situation). During a 12-month fellowship period, you can submit as many cases as you like, access all the published material, and re-use any published material for personal use and teaching without further permission.

Articles submitted to BMJ Case Reports are subject to peer review. The journal operates a single anonymised peer review whereby the names of the reviewers are hidden from the author. The article acceptance rate is 42%, the time to the first decision with the review (median)is 52 days, and the time from acceptance to publication (median) is 13 days. This journal is indexed by Emerging Sources Citation Index, MEDLINE (Index Medicus), PubMed Central, Scopus, Embase (Excerpta Medica), and Google Scholar.

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