

27<sup>th</sup>

# MALAYSIAN DIETITIANS' ASSOCIATION NATIONAL CONFERENCE 2022

27 - 28 JUNE 2022

Organised by



CCEC at The Vertical, Bangsar South | Virtual Platform

## DIETITIANS MAKE A DIFFERENCE ENHANCING MNT SKILLS



PROFESSIONALISM



COMPETENCY



VISIBILITY



BREAKTHROUGH



[conference.dietitians.org.my](https://conference.dietitians.org.my)



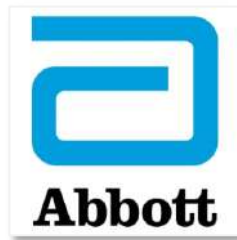
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## Acknowledgement

The organising committee of the 27<sup>th</sup> Malaysian Dietitians' Association National Conference 2022 records its deepest appreciation to the following companies for their support and contribution

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## Table of Contents

ACKNOWLEDGEMENT.....	
WELCOME MESSAGE FROM THE PRESIDENT .....	1
ORGANISING COMMITTEE .....	2
SPEAKERS .....	3
EXHIBITION FLOOR PLAN .....	5
KEY EVENTS .....	6
PROGRAMME.....	7
SPEAKER'S ABSTRACTS .....	12
ORAL PRESENTATION ABSTRACTS .....	21
LIST OF POSTER PRESENTATION.....	33
LIST OF DIETITIANS ENTREPRENEUR ESHOWCASE.....	40



## Welcome Message from the President

It is my great pleasure and honour to welcome you to the inaugural 27th Malaysian Dietitians' Association Hybrid Conference from 27-28 June 2022 at the Vertical, Connexion Convention & Event Centre, Kuala Lumpur.

MDA has successfully navigated the Covid pandemic in the past year by converting our learning activities online with webinar series and online conferences in 2021. Hence, in 2022 we are pleased to announce that we will be welcoming you to a hybrid format for our 27th MDA conference and we can begin interacting with you again! This will also give flexibility and convenience to members!

Our theme is "Dietitians Make A Difference! Enhancing MNT Skills." We will be covering key dietetics practice areas in hospitals, and communities, training and education delivered by local and international speakers.

We invite you to listen to the plenaries, symposiums, and free paper sessions, as well as the skills-enhancing workshops and poster presentations by our eminent invited speakers and presenters. We also continue to be the platform for student dietitians to present their case studies and undergraduate research findings.

MDA Annual Conference is also the platform where we recognise our achievers through several awards for best dietetics student, best postgraduate thesis, and best clinical instructor, and this year we have created a special award of MDA Rising Star! Congratulations to all the winners of these awards which we will announce during the Conference.

Finally, I would like to thank our corporate sponsors who despite the economic challenges of the pandemic, continue to generously support MDA to keep dietitians up to date on the latest knowledge and technologies available to dietitians in Malaysia! I encourage all attendees to take some time to browse through the virtual booths of our sponsors.

Enjoy the conference!



Prof Dr Winnie Chee Siew Swee  
President of Malaysian Dietitians' Association &  
27th Malaysian Dietitians' Association Conference



## Organising Committee



**Prof. Dr. Winnie Chee Siew Swee**

**President**



**Prof. Dr. Hazreen Abdul Majid**

**Vice-President**



**Dr. Nurul Huda Razalli**

**Secretary**



**Dr. Ng Ai Kah**

**Treasurer**

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**Prof. Dr. Winnie Chee Siew Swee**



**Prof. Dr. Hazreen Abdul Majid**



**Assoc. Prof. Dr. Nik Shanita Safii**



**Assoc. Prof. Dr. Barakatun  
Nisak Mohd Yusof**



**Ms. Nurul Huda Ibrahim**

## Publicity & Social Committee



**Mr. Georgen Thye Choong Jean**



**Ms. Mushidah Zakiah Mohad Akran**



**Ms. Rozanna M. Rosly**



## Keynote & Plenary Speakers



**Dr. Imelda Balchin**

KPJ Damansara Specialist Hospital



**Prof. Kevin Whelan**

King's College London



**Prof. Jennie Brand-Miller**

The University of Sydney

## Symposium Speakers



**Prof. Dr. Winnie Chee Siew Swee**

International Medical University



**Ms. Chua Kai Jia**

Alpro Pharmacy



**Assoc. Prof. David Mutch**

University of Guelph



**Prof. Eleanor Beck**

University of Wollongong Australia



**Prof. Dr. Firdaus Mukhtar**

Universiti Putra Malaysia



**Mr. Georgen Thye Choong Jean**

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**Dr. Hamdan Mohamad**

Ministry of Health Malaysia



**Dr. Heidi Staudacher**

Deakin University





**Dr. Lee Ching Li**

International Medical University



**Assoc. Prof. Dr. Lim Soo Kun**

University of Malaya



**Dr. Noor Airini Ibrahim**

Universiti Putra Malaysia



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International Medical University



**Assoc. Prof. Dr. Razinah Sharif**

Universiti Kebangsaan Malaysia



**Prof. Sanjiv Mahadeva**

University of Malaya



**Dr. Tah Pei Chien**

University of Malaya Medical Centre

## Workshop Speakers



**Prof. Dr. Hazreen Abdul Majid**

University of Malaya



**Ms. Lim Yi Chien**

Homey Nutrition



**Mr. Mohd Izham Mohamad**

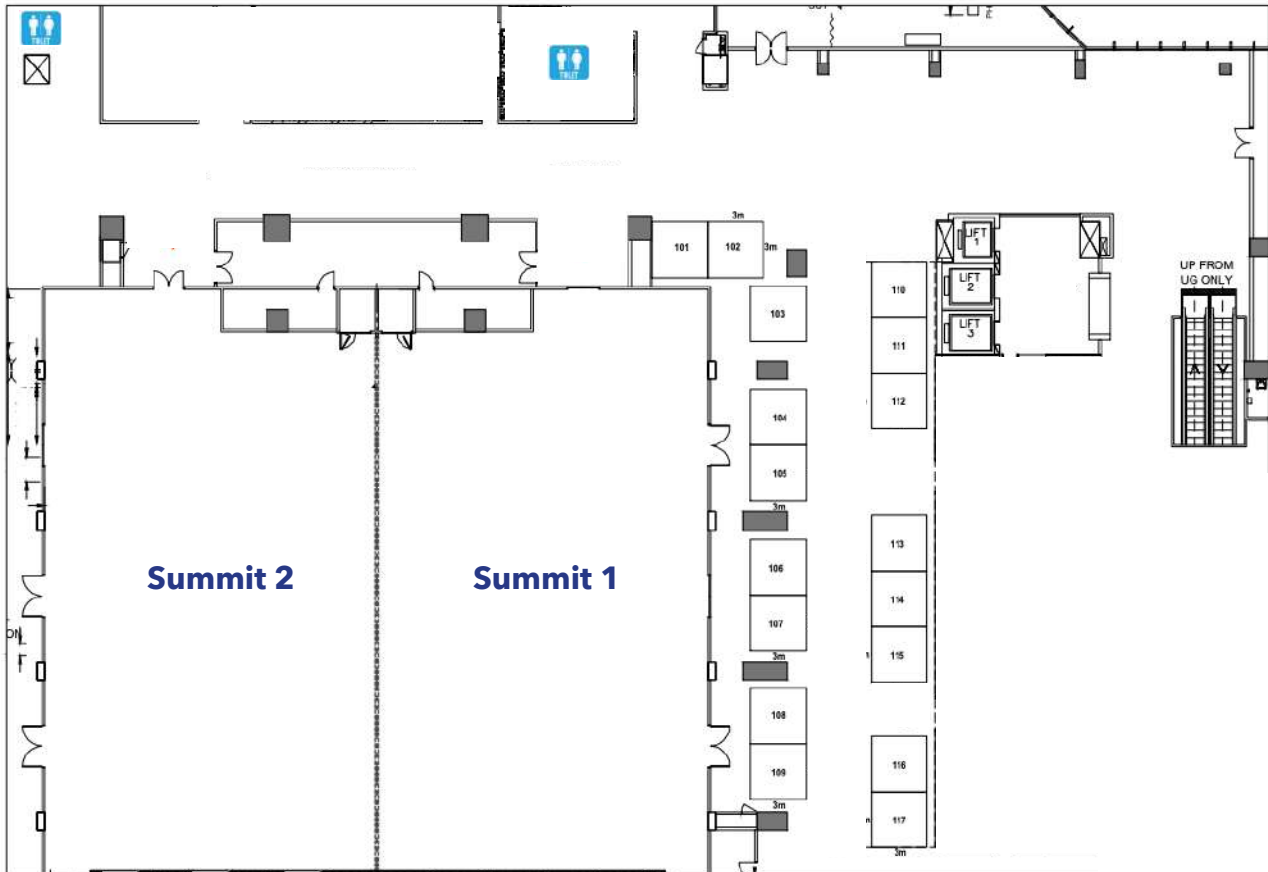
Sports Nutrition Center,  
National Sports Institute



**Ms. Siti Shafurah Abas**

Babymama Trading

## Exhibition Floor Plan



### COMPANY

- Abbott
- Nestle Health Science
- InBody
- NKR
- SECA
- Malaysian Dietitians' Association
- Kotra Pharma
- Yakult
- Delfi
- Pharm-D
- Ajinomoto
- B-Crobes
- Entrepreneur/Innovation Showcase

### BOOTH

- 101&102
- 103
- 104 &105
- 106&107
- 108
- 109
- 110
- 111
- 112
- 113
- 114
- 115
- 116&117





## Key Events

### Opening Ceremony

27 June 2022 (Day 1), 09:15 - 10:15

#### Welcome Address

*Prof. Dr. Winnie Chee Siew Swee, President of MDA*

#### Presentation of Awards

*Outstanding Undergraduate Dietetics Student Award  
Best Postgraduate Award  
Outstanding Clinical Instructor Award  
MDA Honorary Fellowship Award  
MDA Rising Star Award*

### 28<sup>th</sup> Malaysian Dietitians' Association Annual General Meeting

27 June 2022 (Day 1), 16:20 - 17:30

### Closing Ceremony

28 June 2022 (Day 2), 17:30 - 18:00

#### Closing Remark

*Prof. Dr. Winnie Chee Siew Swee, President of MDA*

#### Prize Giving Ceremony

#### Lucky Draw



## Programme

27 June 2022, Monday (Day 1)

Time	Session
08:30 - 09:15	<p><b>Keynote Lecture</b> <i>Chairperson: Prof. Dr. Hazreen Abdul Majid</i></p> <p><b>Navigating Your Career Path Into the Next Level</b> <i>Dr. Imelda Balchin</i></p> <p>📍 Summit 1 &amp; Summit 2</p>
09:15 - 10:15	<p><b>Welcoming Speech &amp; Opening Ceremony</b></p> <p>📍 Summit 1 &amp; Summit 2</p>
10:15 - 10:30	Morning Tea Break
10:30 - 11:15	<p><b>Plenary 1</b> <i>Chairperson: Prof. Dr Winnie Chee Siew Swee</i></p> <p><b>Diet and Microbiome - Understanding Its Association for Improved Nutrition Therapy</b> <i>Prof. Kevin Whelan</i></p> <p>📍 Summit 1 &amp; Summit 2</p>
11:15 - 12:00	Booth Visit / Online Poster Sessions
12:00 - 13:00	<p><b>Sponsored Lunch Symposium by Abbott</b> <i>Chairperson: Assoc. Prof. Dr. Barakatun Nisak Mohd Yusof</i></p> <p><b>Prehabilitation in Surgery: The Importance of Malnutrition Screening and Early ONS Intervention</b> <i>Dr. Luqman Mazlan</i></p> <p>📍 Summit 1 &amp; Summit 2</p>
13:00 - 14:00	Lunch Break



<p>14:00 - 15:00</p>	<p style="text-align: center;"><b>Symposium 1A: Nutrition Support - What's the New?</b></p> <p><i>Chairperson: Ms. Mushidah Zakiah Mohad Akran</i></p> <ul style="list-style-type: none"> <li>▪ <b>Nutrition in the Critically Ill COVID-19 Patient: Acute Phase and Beyond</b> <i>Dr. Noor Airini Ibrahim</i></li> <li>▪ <b>Association of Goal-Directed Nutritional Adequacy with Clinical Outcomes in ICU Patients.</b> <i>Dr. Tah Pei Chien</i></li> </ul> <p>📍 Summit 1</p>	<p style="text-align: center;"><b>Symposium 1B: Digital Dietetics</b></p> <p><i>Chairperson: Ms. L.Mageswary a/p Lapchmanan</i></p> <ul style="list-style-type: none"> <li>▪ <b>Role of Digital Therapeutics in Healthcare</b> <i>Mr. Georgen Thye Choong Jean</i></li> <li>▪ <b>A Digital Lifestyle Programme: Can It Be Successful?</b> <i>Ms. Chua Kai Jia</i></li> </ul> <p>📍 Summit 2</p>
<p>15:00 - 16:00</p>	<p style="text-align: center;"><b>Symposium 2B: Gut Microbiome</b></p> <p><i>Chairperson: Prof. Dr Hazreen Abdul Majid</i></p> <ul style="list-style-type: none"> <li>▪ <b>Fibre, FODMAPS and the Microbiome: Evidence and Applications for Practice</b> <i>Dr. Heidi Staudacher</i></li> <li>▪ <b>NAFLD &amp; Gut Microbiome</b> <i>Prof. Sanjiv Mahadeva</i></li> </ul> <p>📍 Summit 1</p>	<p style="text-align: center;"><b>Symposium 2B: Diet Consultation for Behaviour Change</b></p> <p><i>Chairperson: Assoc. Prof. Dr Nik Shanita Safii</i></p> <ul style="list-style-type: none"> <li>▪ <b>Rewiring the Brain: Techniques to Counsel for Dietary Behaviour Change</b> <i>Prof. Dr. Firdaus Mukhtar</i></li> <li>▪ <b>Food Conversations: Motivational Interviewing for Behaviour Change</b> <i>Dr. Lee Ching Li</i></li> </ul> <p>📍 Summit 2</p>
<p>16:00 - 16:20</p>	<p style="text-align: center;">Afternoon Tea Break &amp; Booth Visit / Online Poster Sessions</p>	
<p>16:20 - 17:30</p>	<p style="text-align: center;"><b>28<sup>th</sup> Malaysian Dietitians' Association Annual General Meeting</b></p> <p>📍 Summit 1 &amp; Summit 2</p>	



## Programme

28 June 2022, Tuesday (Day 2)

Time	Session				
09:00 - 09:45	<p><b>Plenary 2</b> <i>Chairperson: Prof. Dr Winnie Chee Siew Swee</i></p> <p><b>Lifestyle Intervention for Diabetes Prevention: Evidence from PREVIEW</b> <i>Prof. Jennie Brand-Miller</i></p> <p>Summit 1 &amp; Summit 2</p>				
09:45 - 10:00	Morning Tea Break				
10:00 - 10:50	<table border="1"> <thead> <tr> <th>Free Paper 1A: Undergraduate Student Case Study</th> <th>Free Paper 1B: Undergraduate Student Research Paper</th> </tr> </thead> <tbody> <tr> <td> <p><i>Chairperson: Ms. Rozanna Rosly</i></p> <ul style="list-style-type: none"> <li><b>Risk of Overfeeding in a Critically Ill Traumatic Brain Injury Patient</b> <i>Nurul Iman binti Mohd Zulkarnain</i></li> <li><b>Severe Malnutrition with High Risk of Refeeding Syndrome (Oral Intake) in the Inpatient Setting</b> <i>Sapnahb binti Fazal Rahman</i></li> <li><b>The Nutritional Management for Pediatric Secondary DM in Pancreatoblastoma: A Case Study</b> <i>Yokanantini A/P Muniandy</i></li> <li><b>Transitional Feeding From Parenteral to Enteral Nutrition in Patient With Esophagitis, Esophageal Bronchial Fistula and Esophageal Stricture</b> <i>Chua Ee Lin</i></li> <li><b>Pre-Operative Nutritional Management for Gastrointestinal Surgery Patient Involving Parenteral Nutrition</b> <i>Engku Nasiha binti Engku Ngah Sayuddin</i></li> </ul> <p>Summit 1</p> </td> <td> <p><i>Chairperson: Dr Lee Ching Li</i></p> <ul style="list-style-type: none"> <li><b>A Workforce Survey on Employment Data and Job Satisfaction Among Dietitians in Malaysia</b> <i>Nicholas Ooi Jiawei</i></li> <li><b>Is There Any Relationship Between Pro-Inflammatory, Anti-Inflammatory and Empirical Dietary Inflammatory Index (eDII) Score and Cognitive Frailty (CF) Among Community-Dwelling Older Adults in Klang Valley, Malaysia</b> <i>Felicia Bong Jun Fae</i></li> <li><b>Body Composition Analyses in Patients with Morbid Obesity Following Medical Nutrition Therapy</b> <i>Mohammadreza Hidarn</i></li> <li><b>Educational Quality of YouTube Videos Related to Dysphagia Diet</b> <i>Madhunishaa A/P Puthan</i></li> <li><b>Self-Esteem and Dietary Changes of Cancer Patients in Hospital Universiti Sains Malaysia: A Cross-Sectional Study</b> <i>Nurul Iman binti Mohd Zulkarnain</i></li> </ul> <p>Summit 2</p> </td> </tr> </tbody> </table>	Free Paper 1A: Undergraduate Student Case Study	Free Paper 1B: Undergraduate Student Research Paper	<p><i>Chairperson: Ms. Rozanna Rosly</i></p> <ul style="list-style-type: none"> <li><b>Risk of Overfeeding in a Critically Ill Traumatic Brain Injury Patient</b> <i>Nurul Iman binti Mohd Zulkarnain</i></li> <li><b>Severe Malnutrition with High Risk of Refeeding Syndrome (Oral Intake) in the Inpatient Setting</b> <i>Sapnahb binti Fazal Rahman</i></li> <li><b>The Nutritional Management for Pediatric Secondary DM in Pancreatoblastoma: A Case Study</b> <i>Yokanantini A/P Muniandy</i></li> <li><b>Transitional Feeding From Parenteral to Enteral Nutrition in Patient With Esophagitis, Esophageal Bronchial Fistula and Esophageal Stricture</b> <i>Chua Ee Lin</i></li> <li><b>Pre-Operative Nutritional Management for Gastrointestinal Surgery Patient Involving Parenteral Nutrition</b> <i>Engku Nasiha binti Engku Ngah Sayuddin</i></li> </ul> <p>Summit 1</p>	<p><i>Chairperson: Dr Lee Ching Li</i></p> <ul style="list-style-type: none"> <li><b>A Workforce Survey on Employment Data and Job Satisfaction Among Dietitians in Malaysia</b> <i>Nicholas Ooi Jiawei</i></li> <li><b>Is There Any Relationship Between Pro-Inflammatory, Anti-Inflammatory and Empirical Dietary Inflammatory Index (eDII) Score and Cognitive Frailty (CF) Among Community-Dwelling Older Adults in Klang Valley, Malaysia</b> <i>Felicia Bong Jun Fae</i></li> <li><b>Body Composition Analyses in Patients with Morbid Obesity Following Medical Nutrition Therapy</b> <i>Mohammadreza Hidarn</i></li> <li><b>Educational Quality of YouTube Videos Related to Dysphagia Diet</b> <i>Madhunishaa A/P Puthan</i></li> <li><b>Self-Esteem and Dietary Changes of Cancer Patients in Hospital Universiti Sains Malaysia: A Cross-Sectional Study</b> <i>Nurul Iman binti Mohd Zulkarnain</i></li> </ul> <p>Summit 2</p>
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<p>10:50 - 11:40</p>	<p style="text-align: center;"><b>Free Paper 2A: Dietitians/Postgraduate Case Study</b></p> <p style="text-align: center;"><i>Chairperson: Dr Tah Pei Chien</i></p> <ul style="list-style-type: none"> <li>▪ <b>Nutritional Management of a Patient with Intestinal Failure After a Total of 65CM Small Bowel Resection: A Case Study</b> <i>Bong Chu Wen</i></li> <li>▪ <b>A Nutrition Counselling Based on Goal Setting Strategy in Managing Underweight TB Spine Patient in Rehabilitation Ward.</b> <i>Fung Jin Yee</i></li> <li>▪ <b>Disordered Eating Pattern of an Adult Patient with Bulimia Nervosa in the Outpatient Setting</b> <i>Teo Soo Lay</i></li> <li>▪ <b>Nutrition Challenge in Optimizing Energy, Protein and Micronutrient of a Wernicke Encephalopathy Post Bariatric Patient</b> <i>Tham Sook Mun</i></li> <li>▪ <b>B-Acute Lymphoblastic Leukemia with Chronic GvHD: An Unexpected but Significant Nutritional Intervention</b> <i>Mohd Ramadan Ab Hamid</i></li> </ul> <p>📍 Summit 1</p>	<p style="text-align: center;"><b>Free Paper 2B: Dietitians/Postgraduate Research Paper</b></p> <p style="text-align: center;"><i>Chairperson: Ms. Nurul Huda Ibrahim</i></p> <ul style="list-style-type: none"> <li>▪ <b>Association Between Mobile Health App Engagement, and Weight Loss and Glycemic Control in Adults with Type 2 Diabetes and Prediabetes</b> <i>Melissa Tay Hui Juan</i></li> <li>▪ <b>Efficacy of High Beta-Glucan Oat Supplementation in Type II Diabetes Mellitus: A 12 Weeks, Randomized Human Clinical Trial</b> <i>Nur Anis binti Mohd Ariffin</i></li> <li>▪ <b>Perception, Enablers, &amp; Barriers to Salt Reduction at School in Malaysia</b> <i>Muhammad Darwish Asyraf bin Mohd Isa</i></li> <li>▪ <b>The Effectiveness of a Six Month Hybrid Structured Weight Management Program (Mind- SLIMSHAPE™) During Pandemic COVID-19 Among Overweight and Obese Employees of a Public Institution</b> <i>Siti Munirah binti Abdul Basir</i></li> <li>▪ <b>Which Dietary Pattern Is Related to Abnormal Glucose Tolerance in Women with Previous Gestational Diabetes?</b> <i>Farah Yasmin binti Hasbullah</i></li> </ul> <p>📍 Summit 2</p>
<p>11:40 - 12:00</p>	<p style="text-align: center;">Booth Visit / Online Poster Sessions</p>	
<p>12:00 - 13:00</p>	<p style="text-align: center;"><b>Sponsored Lunch Symposium by Kotra Pharma</b> <i>Chairperson: Prof. Dr Winnie Chee Siew Swee</i></p> <ul style="list-style-type: none"> <li>▪ <b>Fight With the Right Tool: The Role of Perioperative Nutrition on Surgery Outcome</b> <i>Dr. Mohammad Shukri bin Jahit</i></li> <li>▪ <b>Effects of Perioperative Oral Nutrition Supplementation in Patients Undergoing Elective Surgery for Breast and Colorectal Cancers</b> <i>Ms. Wong Ting Xuan</i></li> </ul> <p>📍 Summit 1 &amp; Summit 2</p>	
<p>13:00 - 14:00</p>	<p style="text-align: center;">Lunch Break</p>	



<p>14:00 - 15:00</p>	<p style="text-align: center;"><b>Symposium 3A: Nutrigenomics - Is It Ready for MNT?</b></p> <p><i>Chairperson: Assoc. Prof. Dr. Barakatun Nisak Mohd Yusof</i></p> <ul style="list-style-type: none"> <li>▪ <b>Paving the Way for Nutrigenomics and Personalised Nutrition in Malaysia: Is It Ready for Mainstream Practice?</b> <i>Assoc. Prof. Dr Razinah Sharif</i></li> <li>▪ <b>The Challenges of Moving from Bench to Bedside</b> <i>Assoc. Prof. David Mutch</i></li> </ul> <p>📍 Summit 1</p>	<p style="text-align: center;"><b>Symposium 3B: Cardiometabolic &amp; Renal Nutrition</b></p> <p><i>Chairperson: Assoc. Prof. Dr. Zulfitri Azuan Mat Daud</i></p> <ul style="list-style-type: none"> <li>▪ <b>Glycemic Index - Latest Research and Real World Application</b> <i>Prof. Jennie Brand-Miller</i></li> <li>▪ <b>Proteins &amp; Kidneys: When to Initiate Low Protein Intake?</b> <i>Assoc. Prof. Dr Lim Soo Kun</i></li> </ul> <p>📍 Summit 2</p>
<p>15:00 - 16:00</p>	<p style="text-align: center;"><b>Symposium 4A: Quality Matters in Dietetics</b></p> <p><i>Chairperson: Dr Ng Ai Kah</i></p> <ul style="list-style-type: none"> <li>▪ <b>MOH's Path in Dietetic Quality Activities</b> <i>Dr Hamdan Mohamad</i></li> <li>▪ <b>Assessment of Food Service Quality &amp; Identification of Improvement Strategies</b> <i>Mdm. Mary Easaw</i></li> </ul> <p>📍 Summit 1</p>	<p style="text-align: center;"><b>Symposium 4B: Dietetics Education</b></p> <p><i>Chairperson: Dr Nik Mazlan Mamat</i></p> <ul style="list-style-type: none"> <li>▪ <b>EPAs - The Way Forward for Competency in Dietetics</b> <i>Prof. Eleanor Beck</i></li> <li>▪ <b>COVID-19 and Dietetics Education - Opportunities for Innovation or Peril?</b> <i>Prof. Dr Winnie Chee Siew Swee</i></li> </ul> <p>📍 Summit 2</p>
<p>16:00 - 16:30</p>	<p>Afternoon Tea Break &amp; Booth Visit / Online Poster Sessions</p>	
<p>16:30 - 17:30</p>	<p style="text-align: center;"><b>Workshop 1</b></p> <p><i>Chairperson: Ms. Mushidah Zakiah Mohad Akran</i></p> <p><b>Kick start in Dietetics and Sports Related Nutrition Research</b> <i>Mr. Mohd Izham Mohamad</i> <i>Prof. Dr Hazreen Abdul Majid</i></p> <p>📍 Summit 1</p>	<p style="text-align: center;"><b>Workshop 2</b></p> <p><i>Chairperson: Mr. Georgen Thye Choong Jean</i></p> <p><b>Dietitian as Entrepreneur. Do You Have What It Takes?</b> <i>Ms. Lim Yi Chien</i> <i>Ms. Siti Shafurah Abas</i></p> <p>📍 Summit 2</p>
<p>17:30 - 18:00</p>	<p style="text-align: center;">Closing Ceremony</p>	



## Speaker's Abstracts

### Keynote Lecture

#### Navigating Your Career Path Into the Next Level

**Dr. Imelda Balchin**, KPJ Damansara Specialist Hospital

### Plenary 1

#### Diet and Microbiome – Understanding Its Association for Improved Nutrition Therapy

**Prof. Kevin Whelan**, King's College London

The human gut microbiome comprise over a trillion bacteria. Improvements in technologies to characterise this ecosystem have advanced our understanding of the association of the microbiome with health and disease. Although these new advances are exciting, they present challenges to dietitians who are faced with an ever-increasing number of research studies to read and interpret, and are required to respond to questions from patients regarding the potential of microbiome modification to ameliorate disease. Diet has a profound affect on the gut microbiome, including different fibres and whole dietary patterns. Meanwhile, probiotics, prebiotics and fermented foods have been used for many years to modify the microbiome. The extent to which the microbiome can be altered by these dietary components is still emerging, including wide inter-individual variation in response. Both irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD) are characterised by altered luminal and mucosal colonic microbiota, however, their responsiveness to microbiome-modifying treatment differs. Microbiome can also be managed during clinical nutrition, including during enteral nutrition. Furthermore, the role of the microbiome on health extends beyond the gut, with studies showing altered microbiome in people with obesity, diabetes and depression.

### Plenary 2

#### Lifestyle Intervention for Diabetes Prevention: Evidence from PREVIEW

**Prof. Jennie Brand-Miller**, The University of Sydney

The PREVIEW study is one of the largest diabetes prevention studies to far. The aim was to compare the impact of 2 long-term weight-maintenance diets: (high-protein, low-GI vs moderate-protein, moderate-GI) and 2 levels of physical activity (high-intensity vs moderate-intensity) on incidence of type-2 diabetes (T2D). The first 2 months of rapid weight reduction (using total meal replacements) was followed by 34 months of randomised weight-loss-maintenance phase. In total 2,326 adults (25-70 y, BMI $\geq$ 25 kg/m<sup>2</sup>) with pre-diabetes were enrolled. The primary endpoint was 3-year incidence of T2D analysed by diet treatment. Secondary outcomes included glucose, insulin, HbA1C, and body weight. At trial endpoint, T2D cases were very low (n = 62) and cumulative incidence rate only 3% (we expected 10-16%), with no significant differences between the 2 diets or 2 levels physical activity. However, significantly fewer participants achieved normoglycemia on the high-protein diet (p<0.0001). In a secondary observational analysis, GI and dietary glycemic load were associated with a greater regain of weight (~0.5 kg/year, 95% confidence interval 0.23 to 0.68, P<0.001) and increases in HbA1c. Taken together, the findings suggest that markers of carbohydrate quality, including dietary GI and glycemic load, are positively associated with weight regain and deteriorating glycemic status after rapid weight loss. Clinical trial reg. no. NCT01777893, clinicaltrials.gov ([www.previewstudy.com](http://www.previewstudy.com)).

## Symposium 1A: Nutrition Support – What's the New?

### Nutrition in the Critically Ill COVID-19 Patient: Acute Phase and Beyond

**Dr. Noor Airini Ibrahim**, Universiti Putra Malaysia

Nutrition in the Critically Ill Covid19 Patient: Acute Phase and Beyond In the recent coronavirus disease 2019 (COVID-19) pandemic, the number of critically ill patients requiring mechanical ventilation in the intensive care unit (ICU) increased exponentially worldwide. Hyperinflammation and prolonged mechanical ventilation led to muscle volume losses and a number of functional disabilities known as post-intensive care syndrome (PICS). Many chronic diseases such as diabetes and cardiovascular diseases and their clustering in polymorbid, often elderly patients are associated with high risk and prevalence of malnutrition and worse outcomes. In the acute phase, nutritional assessment like NRS 2002 needs to be performed upon admission to the ICU as reports of gastrointestinal symptoms are common and poor oral intake may precede their ICU stay. Patients on non-invasive ventilation (NIV) and high flow nasal cannula (HFNC) may tolerate oral nutrition but evidence shows that protein /calorie intake remain inadequate. Specific challenges exist in the intubated and ventilated patients who are frequently severely hypoxaemic, require prone position and are haemodynamically unstable. Poor glycaemic control is made more difficult with use of steroids. Additional strategies are required to preserve skeletal muscle mass and function in highly catabolic conditions like controlled physical activity and mobilization. Efforts must be made to optimise enteral nutrition before resorting to parenteral nutrition. Post extubation dysphagia may impede nutritional rehabilitation. For those who survive the acute phase at least three quarters develop prolonged Covid symptoms which affects daily functional status including long term nutrition. Increased mental distress, physical inactivity, and persistently dysfunctional smell and taste among post-Covid patients should not be underrated. Proper nutrition in the road to recovery of COVID is essential. A plant-based diet is advantageous to provide vitamins, antioxidants and dietary fibres. Vitamins and dietary supplements are important for those with long COVID to maintain overall health and prevent nutrient deficiency. Bibliography 1. ESPEN expert statements and practical guidance for nutritional management of individuals with SARS-CoV-2 infection. *Clinical Nutrition* 39(2020) 1631-1638 <https://doi.org/10.1016/j.clnu.2020.03.022> 2. Nakamura et al Relation between nutrition therapy in the acute phase and outcomes of ventilated patients with COVID-19 infection: a multicenter prospective observational study *Am J Clin Nutr* 2022;115:1115-1122 3. Formenti et al Nutrition Support in Patients With Acute Respiratory Distress Syndrome COVID-19. *Nutrition in Clinical Practice*. February 2021 1-2 4. Storz M.A. Lifestyle Adjustments in Long-COVID Management: Potential Benefits of Plant-Based Diets. *Current Nutrition Reports* (2021) 10:352-363

### Association of Goal-Directed Nutritional Adequacy with Clinical Outcomes in ICU Patients.

**Dr. Tah Pei Chien**, University of Malaya Medical Centre

Optimisation of energy and protein provision is a crucial element of the nutritional therapy of critically ill patients, but the tools available for accurately determining the optimal nutritional requirements of specific patients in intensive care units (ICUs) are limited. Thus, this study evaluates the association of goal-directed nutritional adequacy (<80% vs ≥80% of energy, protein, or both energy and protein requirements) with clinical outcomes in ICU patients during the acute phase of critical illness. This is a single-centre prospective cohort study. Energy requirements were guided by indirect calorimetry, and protein requirements were estimated from 24-h urinary urea or at least 1.2g/kg/day if urinary urea is not available. Nutritional intake was recorded daily until discharge, death, or the 14th evaluation day. Clinical outcomes, including mortality, length of mechanical ventilation, length of stay, ventilator-free days, quality of life (QoL) and infectious complications, were collected from the patients' hospital electronic medical record system. Eight domains of QoL, including physical function, social functioning, role limitations due to physical health, role limitations due to emotional problems, mental health, vitality, bodily pain, and general health, were assessed by validated questionnaire Short Form-36 Version 2 (SF-36v2) at six months after ICU admission through telephone interview. Association of goal-directed nutritional adequacy with clinical outcomes was evaluated using multivariate regression analysis with adjustment for potential confounders. Data were collected from 314 critically ill patients with mean age 53.6 ± 18.9 years; 63.4% males; 55.1% medical ICU patients; median number of comorbidities 1.5 (0.0 - 3.0); body mass index 25.8 ± 7.2 kg/m<sup>2</sup>; and APACHE II score 23.5 ± 6.2. Overall, this study showed no significant association between <80% or ≥80% of goal-directed nutritional adequacy with mortality outcomes and QoL. However, early high energy and high protein intake significantly increased ICU and hospital length of stay; reduced 28-day and 60-day ventilator-free days, and was associated with early (<7 days) healthcare-associated infection. This study also found higher protein adequacy associated with improved bodily pain status for QoL. In conclusion, this study suggests that being conservative with energy and protein provision (60 - 80% goal) during the acute phase of critical illness is prudent for patient recovery. We opine that earlier goal-directed nutrition intervention may assist in improving clinical outcomes and QoL. However, whether tailoring such measured requirements with energy delivery will confer clinical benefit for long-staying ICU patients remains to be investigated.



## Symposium 1B: Digital Dietetics

### Role of Digital Therapeutics in Healthcare

**Mr. Georgen Thye Choong Jean**, Holmusk

In 2017, approximately 425 million adults (20-79 years) worldwide were living with diabetes; this number is expected to increase to 629 million by 2045. Although lifestyle changes can effectively reduce the risk of complications in type 2 diabetes mellitus (T2DM), traditional lifestyle interventions are often difficult to implement in primary care settings due to limited resources. Mobile health apps can remedy this by providing cost-effective, adaptable and accessible platforms for disseminating lifestyle change interventions. GlycoLeap (Holmusk), a mobile app that offers a lifestyle management programme for people with T2DM, includes a comprehensive T2DM education curriculum delivered via in-app lessons and a health coaching feature. In a 6-month (24-week) study of 100 T2DM patients using GlycoLeap, statistically significant improvements were observed in HbA1c (-1.3 percentage points,  $P < .001$ ) and weight (2.3% weight reduction from baseline,  $P < .001$ ). These results suggest that GlycoLeap may be an effective strategy to help some adults with T2DM achieve better diabetes control and that it is feasible to integrate it into primary care. In this session, the speaker will also share his experience on strategies for working with payors such as insurance companies and pharmaceutical companies on nutrition-related digital programmes.

### A Digital Lifestyle Programme: Can It Be Successful?

**Ms. Chua Kai Jia**, Alpro Pharmacy

A Digital Lifestyle Programme: Can it be successful? Under the threat of COVID-19, drastic measures were taken worldwide to break the chain of the virus transmission. This has left the healthcare industry with no choice but to venture into the digital transformation. New approaches such as telehealth appointments or remote patient monitoring services needs to come into the "new normal". This digitalization of healthcare offers convenient, easy-to-access care options and better patient experience. Consumers of all ages use technology in all aspects of their lives, and healthcare should not be an exception. However finding shows, consumers of all ages shop online and use online or mobile banking more often than for health-related activities such as refilling a prescription or monitoring fitness and health improvement goals. Certainly, health care needs are often more complex compared to purchasing an outfit or booking a flight. However, technology can definitely help them monitor their health and make an informed decisions about their health. That is how the first in-kind glucose monitoring program was born in Malaysia. It is backed by a group of health care professionals including, nutritionists, dietitians, pharmacists doctors and endocrinologists. This program has helped many diabetes patients in the community by empowering them with knowledge and guiding them step-by-step to achieve health goals through sustainable lifestyle changes.





## Symposium 2A: Gut Microbiome

### Fibre, FODMAPS and the Microbiome: Evidence and Applications for Practice

**Dr. Heidi Staudacher**, Deakin University

Our understanding of the benefits of dietary intervention for irritable bowel syndrome (IBS) has progressed rapidly in the last 15 years. This has been coupled with scientific advancements around the microbiome and its role in treating disease. This presentation will review the role of the microbiome in the pathophysiology and treatment of IBS, the current evidence for a range of nutrition interventions and their impact on the microbiome, and provide practical recommendations for dietitians to use in their practice.

### NAFLD & Gut Microbiome

**Prof. Sanjiv Mahadeva**, University of Malaya

Non-alcoholic fatty liver disease (NAFLD) is related to obesity and the metabolic syndrome, and has been increasing in prevalence alongside the prevalence of obesity worldwide, particularly in Asia. A proportion of patients with NAFLD develop non-alcoholic steato-hepatitis (NASH), which is recognized to progress to liver cirrhosis, liver failure and liver cancer. Due to the global increase in the prevalence of NAFLD, it is now gradually becoming the leading cause of liver cirrhosis and liver cancer worldwide. Several pathogenetic factors are recognized to lead to the development of NAFLD and its' progression, namely insulin resistance, adipose tissue hormones, obesity, diet, genetic factors and the gut-liver axis. The gut microbiota are believed to be important components of the gut-liver axis. Observational studies have highlighted an imbalance in the gut microbiota, characterized by an increase in gram-negative bacteria, particularly the Enterobacteriaceae family and the related genus Escherichia (proteobacteria). This trend towards an increase in gram negative bacteria persists both in severe fibrosis and liver cirrhosis. Furthermore, small intestinal bacterial overgrowth (SIBO) has been detected in 40 - 70% of patients with NAFLD, and has been suggested to increase hepatic steatosis via increase intestinal permeability and endotoxemia.

## Symposium 2B: Diet Consultation for Behaviour Change

### Rewiring the Brain: Techniques to Counsel for Dietary Behaviour Change

**Prof. Dr. Firdaus Mukhtar**, Universiti Putra Malaysia

Behavior change involves multifactorial approach. Prevalence of obesity and metabolic disorders has been consistently raise, regardless the clinical trial or community health awareness to promote healthy lifestyles. Aiming to change patient's behavior to improve their food intake and eating behavior is challenging. This presentation will discuss factors that make the behavior fail to change and helpful strategise to assist dietitian to conduct an effective dietary counselling by understanding patients' way of thinking and emotion that affected their maladaptive behavior.

### Food Conversations: Motivational Interviewing for Behaviour Change

**Dr. Lee Ching Li**, International Medical University

Dietitians provide nutrition counselling to support the responsibility for self-care needed to change eating behaviour. People who are ambivalent about changing their diet have contradictory attitudes towards certain eating behaviours. High levels of ambivalence reduce the likelihood of a person changing their eating behaviour. Motivational Interviewing (MI) is a nutrition counselling strategy that can be applied to elicit behaviour change by helping patients explore and resolve ambivalence. When using MI, the dietitian behaves in a manner that supports collaboration with, evocation from, and autonomy of, the patient. The principles of MI include developing discrepancy, avoiding arguments / rolling with resistance, expressing empathy, and supporting self-efficacy. Micro-skills such as the use of open-ended questions, affirmations, reflections, and summaries, can be used to elicit change talk and address ambivalence.



## Symposium 3A: Nutrigenomics – Is It Ready for MNT?

### Paving the Way for Nutrigenomics and Personalised Nutrition in Malaysia: Is It Ready for Mainstream Practice?

**Assoc. Prof. Dr. Razinah Sharif**, Universiti Kebangsaan Malaysia

Nutrition is an interdisciplinary science that studies the interactions of nutrients with the body as the pillar for health. Nutrition is highly complex due to the underlying various internal and external factors that could model it. Thus, hacking this complexity requires more holistic strategies that could unveil these dynamic system interactions. The ongoing omics era with its high-throughput molecular data generation is paving the way to embrace this complexity and is deeply reshaping the whole field of nutrition. Understanding the future paths of nutrition science is of importance from both translational and clinical perspectives. This presentation will focus on how nutrition (micronutrients) can affect our genome health as well as the recent findings from our research group working in nutritional metabolomics and healthy ageing. Although limited work on nutrigenomics is evident locally, future for nutritional genomics in Malaysia is still warranted. In addition, nutrigenomics may have applications in the development of personalised nutrition interventions, which may facilitate larger, more appropriate and sustained changes in eating (and other lifestyle) behaviours for disease prevention. The advancement of nutrigenomics and the enhanced ability to directly study the interactions between nutrition and genetic variants and expression will lead to progress in the field of personalized nutrition, in Malaysia and Asian landscape and may benefit not only health practitioners but also the public.

### The Challenges of Moving from Bench to Bedside

**Assoc. Prof. David Mutch**, University of Guelph

The premise for precision nutrition is one that has existed since the days of Aristotle, when early philosophers recognized that different people have different needs that are important for their constitution. Since the completion of the Human Genome Project, the genetic underpinnings for these different needs have started to be uncovered due to the accessibility of powerful whole-genome technologies. The area of research focused on the study of diet-gene interactions is referred to as "nutrigenomics". The ultimate goal of nutrigenomics is to use knowledge of diet-gene interactions to personalize nutrition to improve an individual's health and well-being. While interest is extremely high regarding the potential benefits of nutrigenomics, this topic continues to divide opinion. On the one hand, evidence from several survey studies suggests that the general population is interested to learn about their personal genetic information. This interest has fuelled the development of numerous direct-to-consumer (DTC) companies that provide individuals with their personal genetic information related to diet, physical activity, and disease risk. On the other hand, many researchers and healthcare practitioners highlight the limited number of studies showing that providing people with their personal genetic information actually leads to changes in lifestyle behaviours. The objective of this presentation is to highlight recent advances in nutrigenomics and demonstrate that the use of genetic information can help to promote greater improvements in an individual's health compared to general population-based recommendations.

## Symposium 3B: Cardiometabolic & Renal Nutrition

### Glycemic Index – Latest Research and Real-World Application

**Prof. Jennie Brand-Miller**, The University of Sydney

The usefulness of the glycaemic index (GI) of carbohydrate foods is still debated. The primary aim of diabetes management is to normalise blood glucose levels in order to reduce development and progression of complications, but there is currently no universal approach to optimal dietary treatment. We conducted a Cochrane systematic review and meta-analysis of the effectiveness of low glycaemic index/low glycaemic load (GI/GL) diets on glycaemic control, cardiovascular risk factors and anthropometry. We identified 42 RCTs (10 cross-over and 32 parallel-arm) which included ~3000 participants for an average duration of 20 weeks (6 trials were 12 months or more). For the primary outcome, HbA1c, comparing a low GI/GL diet with any other comparator diet, there was a mean difference in HbA1c of -0.32% points in favour of a low GI/GL diet (moderate certainty evidence). For waist circumference, there was a reduction of -1.9 cm favouring a low GI/GL diet. For Fasting Blood Glucose, there was a reduction of -0.5 mmol/L favouring a low GI/GL diet. In contrast, there were no statistically and/or clinically significant differences in indices of lipid metabolism. In secondary analysis of the 3-year PREVIEW diabetes prevention study in ~2300 people with overweight/obesity and pre-diabetes, GI and GL were inversely associated with an increase in satiety ratings and positively associated with an increase in desire to eat and desire to eat something sweet. No associations were observed between total carbohydrate intake and appetite ratings. PREVIEW is the first large-scale, long-term study to report that carbohydrate quality (GI) and combination of carbohydrate quality and quantity (GL) were associated with appetite sensations, whereas carbohydrate quantity in itself was not. Low GI or GL diets may be recommended to individuals with overweight or obesity for long-term weight loss maintenance, especially after rapid weight loss. Clinical trial reg. no. NCT01777893, clinicaltrials.gov ([www.previewstudy.com](http://www.previewstudy.com)).

### Proteins & Kidneys: When to Initiate Low Protein Intake?

**Assoc. Prof. Dr. Lim Soo Kun**, University of Malaya

Chronic kidney disease (CKD) signifies irreversible loss in renal function, which is characterized by progressive decline in renal function till end stage renal disease. The main treatment strategy in CKD management focuses on retardation of CKD progression. Established strategies include optimal glycaemic control for diabetics, blood pressure control, proteinuria reduction using Renin Angiotensin System (RAS) blockers and the latest SGLT-2 inhibitors and Mineralocorticoids Receptor Antagonists (MRA). Depending on the severity of kidney disease, many patients continue to progress despite optimization of the strategies above. Dietary management constitutes an essential part of CKD management where it complements and enhances the therapeutic effects of certain CKD therapy. For example, low salt diet enhances the blood pressure lowering effects of RAS blockers. Low protein diet reduces intra-glomerular pressure and optimizes the beneficial effects of RAS blockers and SGLT-2 inhibitors. Few important principles in implementing dietary protein restriction include: i. The more advanced the CKD, the more strict restriction in dietary protein intake. ii. The importance of dietary protein restriction needs to be conveyed to patients in earlier stage of CKD. iii. Protein source is equally important as amount of dietary protein. In this talk, the speaker will elaborate on the following: 1. How to avoid unnecessary dietary restriction in CKD 2. How to balance between renal protection & preventing protein energy wasting when implementing dietary protein restriction in CKD. 3. The role of supplemented low protein diet in the management of CKD





## Symposium 4A: Quality Matters in Dietetics

### MOH's Path in Dietetic Quality Activities

**Dr. Hamdan Mohamad**, Ministry of Health Malaysia

Quality is a much more complicated term than can be defined. It has variety of meanings according to different perspectives. The International Organization for Standardization defined quality as the totality of features and characteristics of service that bear on its ability to satisfy stated or implied needs revolving around the customer. Quality activities is one of the Ministry of Health (MOH) strategies to ensure the provision of high-quality health services for optimal health of the population. Therefore, dietetic professions have cultivated the quality culture among MOH dietitians through many quality initiatives including clinical audit (CA), quality assurance (QA), clinical research, innovations and many more. For the past few years, more than 136 clinical research or case studies, 43 quality activities and 8 innovation projects has been carried out by MOH dietitians as reported to Dietetics Quality and Research Bureau (DQRB) of MOH Dietetic Technical Committee. To further increase the benefits that can be received from the quality activities conducted, Dietitians Quality and Research Convention (DQRC), a biennial event has been introduced by DQRB to enable MOH dietitians to disseminate research findings, innovation ideas and quality strategies that has been carried out while delivering Medical Nutrition Therapy (MNT). Involvement in quality and research activities should be used to increase the quality of dietetic services, thus emerge the image of the dietetic profession among other health professionals.

### Assessment of Food Service Quality & Identification of Improvement Strategies

**Mdm. Mary Easaw**, International Medical University

Assessment of Food Service Quality & Identification of Improvement Strategies Mary Easaw, (BSc N&D (India) Pg Dip CVTS, MSc in Advance Healthcare (LJMU, UK) Senior Lecturer IMU, Consultant Dietitian CVSKL. The purposes of audits are to assess hospital foodservice quality and to identify the causes of quality problems and then plan appropriate improvement strategies. The American Society for Quality defines quality in two ways: "the characteristics of a product or service that bear on its ability to satisfy stated or implied needs and a product or service that is free of defects." In service marketing literature, service quality is conceptualized as service meeting customers' expectations. In food service, the quality risks identified may be limited choices in the menu, menus that may not address cultural preferences, temperature abuse and lack of understanding among patients of their nutritional needs. It is vital that dietary departments conduct patient surveys on regular basis, develop new menus, especially for the therapeutic diets, maintain food temperature with purchase of proper food trolleys and conduct regular meal rounds. It is advisable to provide bedside nutrition education and address the complaints. Staff training is vital and should be continuous. Many of the above issues have been well studied and published in research. However, in the foodservice we need to resolve the issues in a timely manner. There are many tools but here I would highlight the Plan, Do, Check & Act (PDCA) cycle method. Enclosed is the brief description of the PDCA. This presentation will briefly discuss how PDCA can be used to improve foodservices. PDCA cycle Components Plan Identify your problems Do Test potential solutions Check Study results Act Implement the best solutions



## Symposium 4B: Dietetics Education

### EPAs – The Way Forward for Competency in Dietetics

**Prof. Eleanor Beck**, University of Wollongong Australia

Assessment in dietetics education is moving away from descriptions of elements in a specific practice area, to a broader description of skills which may be provided in any setting. Underpinning this concept is programmatic, competency-based assessment. To describe the tasks and work-based activities dietitians may engage in, the concept of “entrustable professional activities” has evolved. Entrustable Professional Activities (EPAs) are discrete tasks, which can be easily observed and assessed. They describe activities which form the safe delivery of healthcare for the profession. In practice, our university has used EPAs to assist both students and supervisors/assessors in describing activities that they first partake in, can improve upon, and ultimately, show competence in. In Australia, EPAs have been defined under four key activity areas: 1. develops and implements a nutrition intervention, 2. facilitates a food, nutrition and/or lifestyle conversation, 3. performs professional activities/projects, and 4. works as part of a team. Students benefit from breaking down their workload into discrete tasks to ensure they can detail precise areas of improvement. Critically, it assists students to define any tasks they should practice, to achieve their goal of competent graduate. While the theme of this conference focuses on Medical Nutrition Therapy, this presentation will highlight how the skills dietitians possess can be used in all domains of practice to enhance development across the breadth of dietetics care.

### COVID-19 and Dietetics Education – Opportunities for Innovation or Peril?

**Prof. Dr Winnie Chee Siew Swee**, International Medical University

COVID-19 has placed undue pressure for dietetic programmes in Malaysia to consider alternative models of placement due to social distancing, risk mitigation and limited on-site training opportunities imposed by placement partners. Universities training dietetics students in Malaysia had to make changes to the dietetics curriculum between April 2020 to December 2021 in IMU to ensure students competence are not compromised because of this unprecedented situation. Many resorted to technology and innovate to deliver knowledge, practice and skills utilizing online platforms for students to conduct public webinars for community dietetics practice, virtual dietary counselling to patients even in acute care settings and case discussions using simulated case studies. Such changes are relevant to future work opportunities for graduates which include use of technology, digital literacy and communication skills. However, the lack of direct patient/community contact in a real-world setting has negatively impacted the students’ personal connection to meaningful work, team working abilities due to prolonged studying in isolation and the lower morale, productivity, and accountability due to lack of social interactions. As things return to normalcy in 2022, the dilemma is how much of the new approach to training in the curriculum should be maintained or revert to standard practice.



## Sponsored Lunch Symposium

*Sponsored by Abbott*

### **Nutritional Prehabilitation in Surgery – The Importance of Malnutrition Screening and Early Nutritional Intervention**

**Dr Luqman Mazlan**, Pantai Hospital Kuala Lumpur

Early nutrition intervention during the peri-operative period in patients undergoing surgery has been shown to improve outcome and reduce morbidity and mortality. This is especially true when nutrition management is included in hospitals with an enhanced recovery program. In recent years, prehabilitation before surgery has been gaining traction and nutrition management is one of the three main components of this relatively new concept and expands on these enhanced recovery programs. The talk aims to introduce the concept of nutritional prehabilitation and revisits the importance of nutrition screening and early nutritional intervention with new tools and updated guidelines.

*Sponsored by Kotra Pharma*

### **Effects of Perioperative Oral Nutrition Supplementation in Patients Undergoing Elective Surgery for Breast and Colorectal Cancers**

**Ms. Wong Ting Xuan**, International Medical University

Guidelines on nutrition in cancer recommended the use of preoperative nutrition support for patients at risk of malnutrition and following discharge after hospital as appropriate but the evidence of perioperative nutrition intervention in surgical cancer patients is ambiguous and limited. Thus, this study aimed to investigate the effectiveness of perioperative use of oral nutrition supplements (ONS) among patients undergoing elective surgery for breast and colorectal cancers. Ninety-one patients were randomised into i) Group SS received ONS up to 14 days preoperatively and postoperatively up to discharge, ii) Group SS-E received ONS up to 14 days preoperatively, postoperatively up to discharge and for an extended 90-days post-discharge and iii) Group DS received ONS postoperatively up to discharge. Preoperatively, SS had significantly higher body weight ( $65.1 \pm 0.2$  kg vs  $64.3 \pm 0.2$  kg) and BMI ( $26.6 \pm 0.1$  kg/m<sup>2</sup> vs  $26.3 \pm 0.1$  kg/m<sup>2</sup>) than DS when adjusted for baseline. The proportions of patients meeting ESPEN recommendation for energy and protein intake were significantly higher in SS and SS-E than DS preoperatively (SS: 62% & 73%, SS-E: 57% & 86%, DS: 12% & 8%, respectively). At 90-days post-discharge, SS-E had significantly higher BMI ( $26.7 \pm 0.3$  kg/m<sup>2</sup> vs  $25.6 \pm 0.3$  kg/m<sup>2</sup>) and handgrip strength ( $28 \pm 1$  kgF vs  $25 \pm 1$  kgF) than DS after adjusted for baseline. The proportions of patients meeting ESPEN recommendation for energy and protein intake were significantly higher in SS-E than SS and DS (SS: 15% & 27%, SS-E: 62% & 86%, DS: 20% & 20%, respectively) at 90-days post-discharge. Compared to upon discharge, the proportions of patients in SS-E with hsCRP >10mg/L, and mPINI $\geq$ 0.4 were significantly reduced. Preoperative ONS had modest benefits in maintaining weight status whilst supplementation up to 90-days post-discharge improved handgrip strength and inflammatory markers. Perioperative ONS improved dietary intake without suppressing meal intake.

## Oral Presentation Abstracts

### Undergraduate Student Case Study

#### Risk of Overfeeding in a Critically Ill Traumatic Brain Injury Patient

Nurul, I. M. Z.<sup>1</sup>, Ahmad, K. I.<sup>1</sup>, Siti A. A.<sup>1</sup>

<sup>1</sup>Universiti Sains Malaysia

Mr. M, a 32-year-old male with BMI of 26.0 kg/m<sup>2</sup> was admitted to neuro ICU for severe traumatic brain injury due to alleged motor vehicle accident. He had undergone right external ventricular drain insertion and bifrontal decompressive craniectomy. During 1st visit, only his serum calcium, phosphate, urea, total protein, and albumin were low. However, during the next day follow up, his serum potassium was declining. He was ventilated, sedated, and hemodynamically supported with poor GCS of 2T/15. Patient received obligatory calories of 633.6 kcal/day from IV Propofol during 1st visit which had reduced to 316.8 kcal/day during follow-up. Moreover, 350 ml of coffee ground gastric aspiration was drawn from his body during 1st visit, yet he was still nil by mouth and was referred to dietitian as he was allowed to start feeding enterally.

The initial diagnosis was increased energy expenditure related to physiological causes increasing nutrient needs as evidenced by post-operation day 1 of external ventricular drain insertion and bifrontal decompressive craniectomy. On the follow-up visit, excessive enteral nutrition infusion related to excessive infusion volume as evidenced by energy intake providing 104.2% of energy requirement including obligatory calories was diagnosed.

The nutrition goal was to initiate feeding gradually to promote recovery while limiting the risk of aspiration and refeeding syndrome. With energy requirement of 1600 kcal/day, he was prescribed 50 ml of Peptamen AF on continuous pump feeding for 3 hourly feed with 1-hour rest, for 6 times per day whereas the enteral regimen was adjusted during follow-up to 6 scoops of Peptamen with pump rate of 70 ml per hour to avoid overfeeding the patient.

His energy intake and gastric residual volume were monitored, whereby he had tolerated well with feeding without any gastric aspiration and had achieved 84.4% of energy requirement from enteral nutrition alone.

#### Severe Malnutrition with High Risk of Refeeding Syndrome (Oral Intake) In the Inpatient Setting

Sapnah binti Fazal Rahman<sup>1</sup>, Fadhlina Bt Abd Samad<sup>2</sup>, Teo Soo Lay<sup>1</sup>

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MR is a 62-year-old Malay man admitted for UGIB secondary to stress ulcer, grade-2-hiatus hernia and to rule out lung cancer. His weight is ~45kg with a BMI of 14.7kg/m<sup>2</sup>. He/MR verbalised recent weight loss but was unable to quantify. His serum potassium, phosphate and magnesium were below reference range and his food intake for >1 year pre-admission was only meeting 30% energy and 11% protein requirements due to poor appetite caused by lethargy, complete edentulism and constipation. MR has clubbed fingers, cachexia and SGA rating C. After being kept NBM for 5 days prior to assessment, MR was allowed to eat orally that day at lunch. MR could finish ¾ of the normal diet despite needing several breaks. However, he complained of headache and dizziness shortly after the meal. Overall, MR has a high risk of refeeding syndrome.

Inadequate protein energy intake RT complete edentulism, lethargy and loss of appetite AEB meeting 30% energy and 11% protein requirements for >1 year. Severe starvation related malnutrition RT inadequate calorie intake AEB severe muscle and fat loss and SGA rating C.

The goal was to optimise nutrition status while managing refeeding risk. The prescription was 1800kcal and 90g protein/day. A step-wise oral feeding regimen was planned, starting with ½ portion minced diet at each main meal on Day 1, complemented with 2 Miralac jellies. Portions allowed to gradually increase to full on Day 3. Nutren Diabetik further supplemented diet 4 times/day on Day 4, beginning with 3 scoops/serving, before eventually increasing to 6 scoops/serving on Day 6. MR was educated on the importance of gradual oral intake in relation to refeeding risk. Coordinated with medical team regarding thiamine supplementation, electrolyte monitoring and their replacements.

Daily monitoring of serum potassium, phosphate, magnesium, total oral intake, adherence, and tolerance to current dietary plan.



## The Nutritional Management for Pediatric Secondary DM in Pancreatoblastoma: A Case Study

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A 12-year-2-month-old Chinese boy was diagnosed with diabetes in 2014 at four due to a pancreatectomy for pancreatoblastoma. He had done radical excision of the tumour with pancreaticoduodenectomy, gastrojejunostomy, hepaticojejunostomy, and sparing pylorus in September 2013 and completed four cycles of chemotherapy before surgery and another two cycles after surgery (SIOPEL 3). Born following a pre-term (36 weeks) with a normal birth weight (3.25kg). He has been on continuous subcutaneous insulin infusion (CSII) since his diabetes diagnosis. He was first referred to a dietitian in August 2017 for medical nutrition therapy for type 1 diabetes. Based on the CDC growth chart, his current height (145cm) and weight (36.8kg) increased by 3cm and 1.75kg in the previous three months but were still at the 25th percentile. The HbA1c value increased from 8.6% to 9.0% within one year. The current dietary assessment showed an estimated intake of energy (2521kcal/day), carbohydrates (373g/day@60% of total energy intake), protein (73g/day@12% of total energy intake), and fat (80g/day@28% of total energy intake). He is also on Creon with a maximum of 35 capsules, eight capsules per meal, for pancreatic insufficiency.

His nutrition diagnosis is limited adherence to nutrition-related recommendations (NB-1.6) related to lack of social support due to the caregiver's unable to monitor the patient's carbohydrate intake, as evidenced by reports of high post lunch and dinner blood glucose and increasing trend of HbA1c from 8.6% to 9.0%.

Since the insulin-to-carbohydrate ratio was calculated at 1:3 (midnight), 1:1 (6.00 am), and 1:2 (10.00 pm), the patient was re-educated on carbohydrate counting for the insulin pump, read nutrition labels for unfamiliar foods, and encouraged the carer to be particular about carbohydrate counting for the patient.

Frequent follow-ups of paediatric dietitians specialising in diabetes often move patients towards self-management of their disease to promote growth, and improve their life qualities.

## Transitional Feeding From Parenteral to Enteral Nutrition in Patient With Esophagitis, Esophageal Bronchial Fistula and Esophageal Stricture

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A 36-year-old Malay gentleman, was diagnosed with Acquired Immunodeficiency Syndrome (AIDS) complicated with cytomegalovirus (CMV) Esophagitis, Esophageal Bronchial Fistula, Esophageal Stricture and Moraxella Bacteremia. Patient complained of fever for a week and vomiting and regurgitation for 2 to 3 months. Patient's body mass index (BMI) was 17.2 kg/m<sup>2</sup> (underweight) and experienced more than 5% weight loss in past 1 month. He had low albumin level due to inflammation and high urea level due to bleeding of the fistula. Subjective Global Assessment (SGA) was graded as C (severely malnourished). He was given central total parenteral nutrition (TPN) which provided 1600kcal/day and 75g/day (1.5g/kg BW) of protein. He was referred to a dietitian for transition feeding to percutaneous endoscopic gastrostomy (PEG) tube feeding.

Swallowing difficulty related to patient currently diagnosed with esophagitis with tracheoesophageal fistula and esophageal stricture [physiologic-metabolic etiology] as evidenced by patient experienced coughing and vomiting when consuming solid foods and drinking beverages as well as dysphagia for past 1 week.

The intervention was aimed to plan the PEG tube feeding regime. Patient's energy requirement was 1650kcal/day and protein requirement was 76.5g/d (1.5g/kg BW). The full feeding was 6.5 scoops of standard formula with 200ml of water and 80ml water flushing given 3 hourly, 7 times per day which provided 1638kcal/d with 68.25g/d (1.3g/kg BW) of protein to the patient. The feeding regime was increased gradually while TPN was suggested to taper down accordingly when the patient was able to tolerate well for at least 2 feedings.

Serum albumin and urea levels were improved and within the normal range. Patient tolerated well with the feeding regime and achieved full feeding within 3 days. Patient was discharged with an individualized PEG tube feeding regime for home care plan.



## Pre-operative Nutritional Management for Gastrointestinal Surgery Patient Involving Parenteral Nutrition

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A 76-year-old Malay female was admitted on April 4th for nutritional build-up prior to her scheduled surgeries, a partial cystectomy and reverse colostomy. The patient has undergone various surgical procedures causing changes to her gastrointestinal structure and function since being diagnosed with rectal cancer in December 2021. Current diagnoses include newly diagnosed bladder cancer and acute kidney injury (AKI) with underlying hypertension and hyperlipidemia. Weighing 36kg at a height of 136cm, the patient was underweight with a BMI of 17.8kg/m<sup>2</sup>. The patient was also found to be malnourished (Grade B) following PG-SGA assessment. Laboratory data revealed renal profile, liver function test and complete blood count abnormalities. However, vital signs were normal and stoma output was within target volume with formed texture. Upon referral, the patient was to begin supplementary parenteral nutrition alongside oral intake. Dietary assessment displayed inadequate energy intake, although the patient reported decent appetite with no eating difficulties.

Inadequate energy intake related to increased nutrient needs due to catabolic illness and altered GI structure/function as evidenced by energy intake of 70% of recommended energy (29kcal/kg) as seen in diet recall, consistent severe weight loss including 1.4kg (4%) over past week, and BMI of 17.8kg/m<sup>2</sup>.

Nutritional intervention aimed to increase energy and protein requirements to optimise the patient's nutritional status in preparation for major surgery. With PN providing 800kcal, the balance was provided from solid food intake and oral nutrition supplements (ONS).

Monitoring and evaluation revolved around adherence to dietary advice, tolerance to feeding and biochemical data. Adjustments to the feeding plan were revised accordingly over the course of 3 weeks. The patient's progress over the course of follow-ups included a 4.4kg weight gain after two weeks and consistent renal profile improvement. With surgery postponed to May, the patient was allowed to discharge with ONS to supplement oral intake.



## Undergraduate Student Research Paper

### A Workforce Survey on Employment Data and Job Satisfaction Among Dietitians in Malaysia

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This study is intended to investigate the current workforce and job satisfaction level among dietitians in Malaysia.

An online web-based questionnaire was distributed to dietitians from 10 January to 9 March 2022. The questionnaire consists of 4 sections, with 42 questions. The survey was sent every week to members of the Malaysian Dietitians' Association (MDA) via the MDA Facebook page, direct emails and Whatsapp groups of dietitians. Data collected were analysed using the Statistical Packages for Social Sciences (SPSS) Version 28. While frequencies, percentages and median were used to describe the data, Chi-square and Mann Whitney U tests were used to analyze the association of years of experience and sector of practice with overall job satisfaction, and the difference in job satisfaction between sectors.

A total of 238 dietitians working in both public and private sectors completed the online questionnaire. 87.4% of respondents were female, with an average age of 31 years old. 36.1% and 63.9% of respondents worked in the public and private sectors respectively. Generally, 85.3 % of respondents were satisfied with their jobs. Of the total respondents, 35% were satisfied with the salary and 32.1% were satisfied with job promotion opportunities. There is a significant difference between the sector of practice ( $p$ -value=0.025). Private sector dietitians score lower in all the three satisfaction aspects than public sector dietitians. There are significant differences in workload ( $p$ -value=0.039), job security ( $p$ -value=0.002) and organizational culture ( $p$ -value=0.011) satisfaction between sectors.

Overall, there was significant dissatisfaction in terms of salary and job promotion opportunities. Private sector dietitians were also dissatisfied with the workload, job security and organizational culture. Thus, employers can improve on the aspects mentioned for better job satisfaction for dietitians.

### Self-Esteem and Dietary Changes of Cancer Patients in Hospital Universiti Sains Malaysia: A Cross-Sectional Study

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The aim of this study is to explore the association between socio-demographic, clinical parameters, and self-esteem status with dietary changes among cancer patients.

A cross-sectional study was conducted among 113 cancer patients aged 18 years old and above using convenience sampling technique in Hospital Universiti Sains Malaysia (Hospital USM). Dietary changes questionnaire was used to assess dietary intake before and after cancer diagnosis while the Rosenberg Self-Esteem Scale (RSES) was used to determine subjects' self-esteem through an interviewer-administered session. Socio-demographic parameters, clinical characteristics and Karnofsky Performance Status Scale were also assessed.

Out of 113 subjects, 98 subjects (86.7%) made changes in their dietary intake after being diagnosed with cancer whereas the mean self-esteem score was  $29.33 \pm 3.52$  which was classified as average self-esteem. However, no statistically significant association was found between socio-demographic, clinical parameters, and self-esteem with dietary changes. There was no increase in intake of any food presumed among the subjects such as vegetables or fruits, but positive changes were observed in which there were significant reduction in red meat, sugar, and sweetened condensed milk intake. The current study showed no significant relationship between self-esteem and dietary changes among cancer patients in Hospital USM ( $r = 0.108$ ,  $p = 0.289$ ). This is because dietary changes among cancer patients is not dependent on self-esteem alone but are influenced by several other factors such as cancer diagnosis, side effects of cancer treatment, medication taken, and information obtained from others.

The findings of this study demonstrated that majority of cancer patients had made dietary changes following cancer diagnosis with average self-esteem level. Nonetheless, it is suggested more studies should be carried out to provide clear understanding on the factors affecting their dietary changes to ensure healthy modifications are made which can prevent decline in nutritional status among cancer patients.

## Is There Any Relationship Between Pro-Inflammatory, Anti-Inflammatory and Empirical Dietary Inflammatory Index (eDII) Score and Cognitive Frailty (CF) Among Community-Dwelling Older Adults in Klang Valley, Malaysia

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The objective of this study is to determine the association between dietary inflammatory risk and CF among community-dwelling older adults in Klang Valley, Malaysia.

This cross sectional study is a part of the AGELESS trial; a multi-domain intervention for reversal of CF among older adults. The Fried's Criteria and Clinical Dementia Rating (CDR) were used to determine CF status. Dietary History Questionnaire (DHQ) and eDII food checklists were utilized to assess the dietary inflammatory risk. Data was analyzed using SPSS version 26.0.

A total of 158 older adults (66.7±5.2 years old) residing in Klang Valley were involved. Most participants were females (57.0%), Malays (88.6%), married (56.3%), attained secondary education level (51.3%), retired (49.4%) and non-smoker (75.3%). CF was detected among 48.1% of the participants. A higher percentage of CF classified as consuming diet with moderate to high inflammatory risk (35.5%) as assessed using eDII score as compared to non CF older adults (24.4%), nevertheless the association was not significant. CF older adults consumed more pro-inflammatory diet (mean eDII 1.37±1.07), whilst non CF tend to consume more of anti-inflammatory diet (mean eDII -3.01±1.39). The CF older adults had a significantly higher mean intake of the food group from white rice (0.22±0.419) as compared to the non CF (0.09±0.281) ( $p < 0.05$ ).

CF older adults are more likely to consume a pro-inflammatory diet particularly from the rice food group. There is a need to further assess the risk of consuming pro-inflammatory diet among older adults using larger sample size and appropriate biomarkers.

## Body Composition Analyses in Patients with Morbid Obesity Following Medical Nutrition Therapy

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Objective: This study aimed to determine body composition in patients with morbid obesity following medical nutrition therapy.

Introduction: While the benefits of weight loss on fat mass and metabolic outcomes have been well established, it is also causing undesirable catabolism of other tissues including the muscle mass. Loss of muscle mass during weight loss from dietary restrictions as part of medical nutrition therapy (MNT) may lead to a reduction in muscle strength and resting metabolic rate, making weight maintenance even harder.

Methods: Using a retrospective pre-post analysis study design, we collected patient's records who was diagnosed with metabolic obesity and attended Metabolic Obesity clinic at Hospital Pengajar UPM since the past one year body composition was assessed using Body Composition Analyzer (SECA, Hamburg, Germany) and the data included weight, height, BMI, waist circumference, fat mass, fat free mass, skeletal muscle mass, visceral adipose tissue, resting energy expenditure, total energy expenditure, and physical activity level.

Results and Discussions: A total of 34 complete patient's records were obtained (Age = 43.12 ± 11.6 years, Female = 70.6%, Male = 29.4%, Body Mass Index = 41.20 ± 8.6 kg/m<sup>2</sup>) for the past one year with a mean duration of 4.5 ± 3.4 months. About 47.1% of the patients had BMI more than 40 kg/m<sup>2</sup>. Following the MNT, BMI (39.9 ± 7.1 kg/m<sup>2</sup> vs. 39.2 ± 7.3 kg/m<sup>2</sup>), waist circumference (112.56 ± 16.03cm vs. 106.68 ± 16.30cm), visceral adipose tissue (4.99 ± 2.81 to 4.17 ± 2.66), proportion of fat mass (48.13 ± 7.43% vs 47.38 ± 7.21%), and resting energy expenditure (1847.76 ± 335.77 to 1820.88 ± 332.54 kcal/day;  $p < 0.001$ ) reduced significantly ( $p < 0.05$ ). Meanwhile, the proportion of fat free mass (51.92 ± 7.62 vs. 52.66 ± 7.19%;  $p < 0.05$ ) increased significantly. No significant change in total energy expenditure (2213.62 ± 446.47 vs 2254.35 ± 454.33 kcal/day), and skeletal muscle mass (25.03 ± 6.63 vs 24.93 ± 6.5 kg) were observed. This study shows that the fat mass is significantly reduced while the skeletal muscle mass is maintained. The proportion of total energy expenditure has no significant change after MNT, which is another reason that shows the patients lose fat mass instead of muscle mass. This would be very important to maintain the weight of patients after MNT. This can cause the metabolism rate to be maintained.

Conclusion: MNT is effective in weight management by maximizing fat mass reduction while maintaining muscle mass. It is also very effective in keeping patients' weight constant after weight loss. The role of specific nutrients as part of MNT prescriptions on body composition warrants future investigation.





## Educational Quality of YouTube Videos Related to Dysphagia Diet

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YouTube has become a popular resource of health information. It might be a platform for increasing public knowledge and understanding or, conversely, for propagating potentially harmful or inaccurate data. This study aimed to assess the quality level of dysphagia diet videos on YouTube.

The keywords "dysphagia diet", "swallowing difficulties diet", "diet disfagia" and "makanan bagi gangguan menelan" were used, and the first 50 videos for each keyword on YouTube were selected. Sixty-six dysphagia diet videos' content was analyzed. The quality of dysphagia diet videos was evaluated by two researchers using the DISCERN score, and Journal of the American Medical Association (JAMA) score. The data was analyzed using Spearman's correlation.

The mean duration and number of views were  $(13.39 \pm 20.74)$  minutes and  $9745.91 \pm 20065.58$ , respectively. The mean VPI and view ratio were  $93.67 \pm 13.52$  and  $172.55 \pm 240.62$ , respectively. The mean DISCERN and JAMA scores were  $41.70 \pm 10.25$  and  $2.23 \pm 0.54$ , respectively. According to average DISCERN scores, the quality of the videos was very low in 4.5% ( $n = 3$ ), low in 33.3% ( $n = 22$ ), average in 39.4% ( $n = 26$ ), good in 21.2% ( $n = 14$ ) and excellent in 1.5% ( $n = 1$ ). The DISCERN average score was significantly positively correlated with duration ( $r = 0.352$ ;  $p = 0.004$ ). The longer duration of the videos, the higher quality of the dysphagia diet videos. The JAMA average score was significantly positively correlated with the number of views ( $r = 0.272$ ;  $p = 0.027$ ) whereby the higher the number of views, the better the content of the dysphagia diet videos.

The overall quality of the dysphagia diet videos in YouTube was average. Healthcare professionals are encouraged to produce and upload high-quality dysphagia diet videos with accurate nutrition information.

## Dietitians/Postgraduate Case Study

### A Nutrition Counselling Based on Goal Setting Strategy in Managing underweight TB Spine Patient in Rehabilitation Ward.

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A 29-year-old female was admitted to the Rehabilitation Ward and diagnosed with TB Spine with Bilateral Pareplegia T7 AIS C like, screened with the Malnutrition Universal Screening Tool (MUST), score 4 (High risk for malnutrition).

Weight=36kg, height=147cm, BMI=16.65kg/m<sup>2</sup>. Significant weight loss of 25% in 6 months was reported. Her renal profile and albumin were normal. The Occupational Therapist gave a score of 30 on the Spinal Cord Independence Measure (SCIM). Patient began losing her appetite in August 2021, primarily due to pain and stress, and has improved slightly since January 2022. Her estimated current intake was 834kcal/day, 31g of protein/day. Estimated dietary requirement by quick method was 1440kcal/day (40 kcal/kgBW/day); 54g of protein (1.5g/kgBW/day).

Inadequate protein-energy intake (NI-5.2) related to food and nutrition related knowledge deficit concerning appropriate amount and type of protein-energy as evidenced by estimated energy intake less than estimated requirement (Energy:57.9%;protein:57.4%).

Nutrition Counselling based on Goal Setting Strategy (C-2.2) was applied. We set a goal consensus, which is to achieve ideal body weight and adequate energy for the rehabilitation sessions. Education on a balanced diet, sources of protein and strategies to achieve requirements during poor appetite was delivered. Oral nutrition supplements were prescribed 3 times/day as per patient agreement, as she was frequently unable to consume more than half serving of meals.

Patient's intake increased to 1405 kcal/day, 52.76g protein/day three days after the first visit, and achieved 1592 kcal/day, 47g protein/day before being discharged from the rehab ward, indicating some progress toward the goal. Before discharge, the weight increased by 0.8kg to 36.8kg, and the SCIM score increased to 46. Re-emphasize on the plan was done to empower the action and she stated that she is confident in her ability to continue after discharge.

### B-Acute Lymphoblastic Leukemia with Chronic GvHD: An Unexpected but Significant Nutritional Intervention

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Hematopoietic Stem Cell Transplantation (HPSCT) is one of the treatments for patients with Acute Lymphoblastic Leukemia (ALL). HPSCT may cause acute or chronic graft-versus-host disease (GvHD) and could deteriorate a patient's quality of life (QoL). Mr. A, a man, aged 23 years old, Malay was diagnosed with Beta ALL and had done Match Sibling Donor (MSD) Allogeneic HPSCT. He experienced chronic GvHD with symptoms; dry mouth, muscle weakness and acute skin GVHD grade I-II and undergo wound care dressing every 2 days. The initial PG-SGA score was 18. His dosing body weight (BW) was set at 50kg. Mr. A was on intermittent nasogastric (NG) via bolus and fed orally with estimated energy intake (EI) and protein intake (PI) of 25kcal/kgBW and 1.58g/kgBW respectively.

The initial Nutrition Diagnosis was Inadequate energy intake related to an altered feeding plan (dressing procedure and patient's non-compliance) as evidenced by an estimated EI of 26kcal/kgBW (requirement 30kcal/kgBW) and 1.58g/kgBW as compared to the requirement of 2.0g/kgBW.

The objectives were to optimize energy and protein intake. The expected outcomes were to prevent weight loss, improve wound care recovery and improve rehabilitation therapy. The challenges in this case were, patients and caregivers did not comply with the feeding regime, the patient needed to fasting before the procedure, delayed feeding post-dressing, felt full after oral feeding and skip NG feeding. We challenged Mr.A with immunonutrition and semi-elemental formula and manipulated the feeding mode to achieve the objectives.

Patient shows improvement after receiving the nutritional intervention; resolved compliance issues, fasting and delayed feeding, and feeling full, but not tolerated with immunonutrition and semi-elemental formula. The PG-SGA scores improved to 13. In conclusion, nutritional intervention for patients with ALL with cGVHD requires careful planning and personalised according to patients' tolerance and conditions.

## Disordered Eating Pattern of an Adult Patient with Bulimia Nervosa in the Outpatient Setting

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LY is a 22-year-old male with bulimia nervosa (BN) whose binge-purge (B/P) urges started 5 years ago. He has underlying bipolar disorder and gout. He presented to the dietitian with a weight and BMI of 80.2kg and 28kg/m<sup>2</sup> respectively. His weight 2 months ago was 81.4kg. LY has raised LDL-cholesterol, triglycerides and uric acid. His usual diet comprises 2600kcal/day with 1 B/P episode. However, for the previous 2 months, LY ate 3600kcal/day, had irregular meals and B/P twice a day. This deterioration was caused by a comment regarding his weight. LY has low self-esteem, 'all-or-nothing' perspective, and some insight to his BN. This visit, he verbalised needing a healthy meal plan to allow himself to B/P. He has previously seen 2 dietitians but claimed he was unable to effectively collaborate with them. Additionally, LY has defaulted all medications and his recent appointment with the psychologist.

Disordered eating pattern RT eating disorder (BN-B/P) AEB habitual eating pattern which has no regular meals and consists of 2 B/P episodes a day.

The aim is to normalise his eating pattern while stabilising weight and reducing B/P episodes. His prescription is 2300kcal/day and 70g protein/day. First, awareness was raised on the contradiction his meal plan request presented, which LY later realised was indeed self-sabotaging. Utilising nutrition counselling, goals were collaboratively set where LY would eat  $\geq 2$  regular meals a day with pre-agreed upon portions and food choices, not pre-plan his B/P in order to reduce its frequency, plus incorporate exercise to lessen his rumination on diet.

His eating behaviour, B/P episodes and weight were re-evaluated 2 months later. Although his weight increased by 3kg, LY consistently ate 2 meals/day, reduced binge portions and purged only once a day. He reported less anxiety overeating and expressed further commitment to reducing his B/P.

## Nutritional Management of a Patient with Intestinal Failure after a Total of 65cm Small Bowel Resection: A Case Study

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Mr. A is a 45-year-old Iban gentleman with a history of small bowel resections twice. He was admitted due to intestinal failure and presented with short bowel syndrome after undergoing exploratory laparotomy, adhesiolysis, small bowel resection, serosal tear repair, and double bowel ileostomy. He was severely underweight (BMI 12.8kg/m<sup>2</sup>, IBW 53.5kg), had 27.3% of initial weight loss in a month, and presented with hyponatremia. He appeared weak and cachectic. Upon review, he was on peripheral parenteral nutrition (1000kcal/day) for the 7th day. He was taking polymeric formula as an oral nutrition supplement and a high protein diet was served. 86% of energy and 2.0g/kg IBW of protein requirements were achieved.

Increased nutrients need (energy, protein, and sodium) related to decreased functional length of the small bowel which leads to malabsorption as evidenced by BMI of 12.8kg/m<sup>2</sup>, significant weight loss in a month, and hyponatremia despite 86% of energy and 2.0g/kg IBW of protein requirements were achieved.

Energy requirement was 3210kcal/day (60kcal/kg IBW) while protein requirement was 107.0-133.8g/day (2.0-2.5g/kg IBW). The goal was to achieve 100% of the energy and 2.0-2.5g/kg IBW of protein requirements with an aim to attain BMI of 13.8kg/m<sup>2</sup> which was one of the criteria for bowel reversal surgery. Peripheral parenteral nutrition (1000kcal/day) was continued. Low residue high calorie high protein high sodium diet, semi-elemental formula added with modular protein formula and MCT oil were served to the patient.

Energy and protein requirements were achieved, the patient's BMI was increased up to 14.9kg/m<sup>2</sup>, and hyponatremia was resolved. The patient underwent bowel reversal surgery. He was discharged without the need for parenteral nutrition and was able to tolerate a normal diet.



## Nutrition Challenge in Optimizing Energy, Protein and Micronutrient of a Wernicke Encephalopathy Post Bariatric Patient

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A 32-year-old female undergone sleeve gastrectomy surgery on December 2021. She was admitted to hospital on 25th March 2022 due to a condition of likely thiamine deficiency causing Wernicke encephalopathy. Prior admission, she experienced persistent vomiting for 2 weeks, presented with visual problem, generalized weakness with oculomotor impairment and mild confusion. She lost 20kg since December, weight change from 148.55kg to 123kg; height is 170cm, BMI from 51.4kg/m<sup>2</sup> reduce to 42.6kg/m<sup>2</sup>; estimated weight loss of 17% in 3/52. Upon admission, her potassium was low 3.4, magnesium normal 0.86mmol/L, adjusted calcium normal 2.50mmol/L and phosphate inorganic high 1.82mmol/L. Serum vitamin b12 was high 6244pmol/L. According to patient's sister, patient was already able to tolerate normal solid food in the 3rd month after bariatric surgery. However, patient was unable to recall in details due to memory lost and family members were not able to specifically quantify the amount of food patient taken. Upon referral, patient's diet was ordered to downgrade to liquid diet as a prophylaxis from eating too fast which may induce another episode of vomiting and was under sister's companion in the ward. On the 5th follow up visit, patient's serum copper report was finally available and found to be low, 11.91umol/L.

1. Inadequate protein energy intake related to memory lost on the 8 golden rules to eat post-bariatric surgery, currently tolerating 20ml thick liquid in 1-3 hourly, meeting 150kcal @ 20.8% EER; 10g protein @ 0.14g/lbw, 13.9% EPR. - full EER & EPR achieved in D3 with ONS.
2. Inadequate protein intake related to early satiety and misunderstood on nutrient and protein needs, overall achieved 20.5-25g protein and patient was only able to comply 1x ONS.
3. Inadequate micronutrients (copper) intake related to food and nutrition knowledge deficit concerning food and supplemental sources as evidenced by low copper.

Main objectives are:

- a) To achieve 100% EER and EPR
- b) To educate post-bariatric 8 golden rules of life-long eating behavior
- c) To achieve 100% micronutrients intake via multivitamin supplementation

Intervention:

1. Educated on nutrient, protein and fluid adequacy. Discussed with patient and her sister in details, meal plan and timing.
  2. Educated on 8 golden rules of life-long eating behavior post-bariatric surgery and observed patient on chewing and swallowing food, drinking liquids in ward.
  3. Suggested high copper food and recipes, however patient unable to tolerate internal organs and high dose of cocoa powder which require sugar for flavoring which may induce dumping syndrome and weight gain, hence a bariatric multivitamin is suggested but patient need to purchase online.
1. Monitor intake, ONS and multivitamin compliance and GI symptoms such as bloated, vomiting and constipation. Physiotherapist's input on body strength and dr's input on improvement on medical condition - frequency of asking repetitive question and memory ability.
  2. On the 3rd visit, patient able to achieve 100% EER and EPR with full ONS, before upgrading diet to normal diet texture.
  3. On the 4th visit, patient EER were revised due to increase physical activity and transition to soft solids > normal sold food.
  4. On 5th visit, patient was not achieving adequate protein intake due to not complying 2x ONS as thought able to eat food, hence to reinforce.
  5. On 6th visit, patient's copper was found low, diet on high copper food suggested, able to achieve 100% EER and EPR.
  6. On 7th follow up, patient unable to tolerate high copper food, hence suggested to purchase bariatric multivitamin online, phone call follow up confirmed patient able to purchase the multivitamin suggested and taking once a day.





## Dietitians/Postgraduate Research Paper

### Association Between Mobile Health App Engagement, and Weight Loss and Glycemic Control in Adults with Type 2 Diabetes and Prediabetes

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Mobile health apps are increasingly used as early intervention to support behavioral change for diabetes prevention and control. This prospective cohort study will investigate app engagement features and its association with weight loss and improved glycemic control among adults with diabetes and pre-diabetes from the intervention arm of Diabetes Lifestyle Intervention using Technology Empowerment (D'LITE) randomized controlled trial.

Diabetes and prediabetes participants (n= 171) with median age of 52 years, and BMI of 29.3 kg/m<sup>2</sup>, who were assigned the Nutritionist Buddy Diabetes app were included. Body weight and HbA1c, were measured at baseline, 3 and 6 months. 476,300 data points on daily app engagement were tracked via the backend dashboard and developer's report. The app engagement data were analyzed by quartiles and weekly means expressed in days per week. Generalized Mixed Model Analysis was used to determine the associations between the app engagements with percentage weight and HbA1c change.

The median overall app engagement rate was maintained above 90% at 6 months. Participants who actively engaged in five or more app features were associated with greatest overall weight reduction of 10.6% from baseline (mean difference -6; 95% CI -8.9 to -3.2, P<.001) at 6 months. Adhering to carbohydrate limit >5.9 days/week and choosing healthier food options >4.3 days/week had the most impact, eliciting weight loss of 9.1% (mean difference -5.2, 95% CI -8.2 to -2.2, P=.001) and 8.8% (mean difference -4.2, 95% CI -7.1 to -1.3, P=.005) respectively. Those who had complete meal log >5.1 days per week achieved greater HbA1c reductions of 1.2% (SD 1.5) as compared to 0.2% (SD 0.6) in the reference groups who utilized the features <1.1 days per week.

Higher app engagement led to greater weight loss and HbA1c reduction among adults with Type 2 diabetes and prediabetes.

### Efficacy of High Beta-Glucan Oat Supplementation in Type II Diabetes Mellitus: A 12 Weeks, Randomized Human Clinical Trial

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Type II diabetes mellitus (T2DM) represents a prevalent and global public health crisis. T2DM is progressive and needs to be managed through medication and lifestyle modification, including a healthy diet. Particularly, the role of beta-glucan for the amelioration of T2DM pathogenesis is receiving ascertain attention among the scientific community. The current study evaluated the effectiveness of high beta-glucan oat supplementation among the T2DM patients

Fifty T2DM patients from the Day Care Unit, Advanced Medical and Dental Institute, Universiti Sains Malaysia, participated in the randomized intervention trial. The supplement group (n=25) received 3.4g beta-glucan in the form of oat supplement for 12 weeks, while the control group (n=25) was treated conventionally. Both groups were reminded not to alter routine and habitual dietary intake. Patients' glycemic status, cardiometabolic profile, and peripheral oxidative stress status were measured simultaneously at baseline and post week-12.

Results showed significant improvements in HbA1c, LDL cholesterol, total cholesterol, body fat, and visceral fat (all p<0.05) in supplement group as compared to the control group. In term of peripheral antioxidant capacity, the levels of total antioxidant capacity (TAC), superoxide dismutase (SOD) and glutathione peroxidase (GPx) were elevated in the beta-glucan supplement group. Similarly, significant reductions in malondialdehyde (MDA), protein carbonyl and 8-hydroxyguanosine (8-OHG) (all p<0.05) concentrations were reported in the supplement group. High beta-glucan oat supplementation is well tolerated with minimal gastrointestinal discomforts.

Conclusively, beta-glucan could produce new approaches for the complementary treatment of diabetes. Larger human clinical trials with more specified interventional criteria are warranted to validate the potential of beta-glucan in ameliorating diabetic conditions.



## Perception, Enablers, & Barriers to Salt Reduction at School in Malaysia

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This study aims to investigate the perceptions towards salt levels and barriers to salt reduction efforts among school canteen operators and school management in Malaysia.

Participants were recruited from randomly selected schools in 5 zones in Malaysia (Western, Northern, Eastern, and Southern regions and East Malaysia) to participate in in-depth interviews (IDIs) to gather perspectives on salt reduction efforts at schools. An inductive approach was employed for data analysis. Thematic analysis was used to analyze the data using Nvivo software.

Seventeen IDIs were conducted among school canteen operators, school principals, and senior assistants for student affairs. Analysis indicated three major themes towards salt reduction efforts: 1. Perception, the majority of stakeholders agreed that a salt reduction strategy was needed in Malaysia to prevent and treat hypertension and cardiovascular disease (CVD). 2. Enablers, such as food demands and technology and media accessibility, and last but not least, 3. Barriers. Major barriers include lack of salt awareness and support, taste feasibility, eating behavior, and food vendors outside school. The findings highlight the gap and potential role of school sectors in reducing population salt intake in Malaysia. Based on the result, a few of the recommendations are to generate awareness on salt, monitor and evaluation towards food accessible to the children, and nationwide implementation of education programs - increasing accessibility towards health information for informed health decisions.

In this study, school canteen operators and school management were in alignment with the need for a salt reduction strategy in Malaysia. Health literacy-oriented organizations should be promoted for salt reduction efforts in school.

## Which Dietary Pattern Is Related to Abnormal Glucose Tolerance in Women with Previous Gestational Diabetes?

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Abnormal glucose tolerance (AGT), which includes pre-diabetes and type 2 diabetes, is highly prevalent in women with previous gestational diabetes (post-GDM). Dietary patterns have been associated with the risk of developing diabetes in women post-GDM, but local evidence is sparse. Hence, this study aimed to determine the association between a posteriori dietary patterns with the risk of abnormal glucose tolerance in women post-GDM.

This cross-sectional study involved 157 women post-GDM (mean age 34.8 years, mean duration after GDM 2.5 years). The study was conducted at Klinik Kesihatan Seri Kembangan and Universiti Putra Malaysia. AGT was diagnosed using 75g 2-hour oral glucose tolerance test based on Malaysian Clinical Practice Guidelines and/or HbA1c. Food intake was assessed using the 2014 Malaysian Adult Nutrition Survey food frequency questionnaire. Dietary patterns were derived using principal component analysis.

Compared to the normal glucose tolerance (NGT) group, respondents with AGT had significantly bigger household size; higher rate of recurrent GDM; higher parity, pre-pregnancy and current BMI, body fat percentage, and waist and hip circumferences. The AGT group also had significantly higher degree of insulin resistance (HOMA-IR), fasting insulin, total cholesterol, triglycerides, LDL-cholesterol; and lower HDL-cholesterol. Five dietary patterns were found: 'Western', 'Traditional', 'Cereal-Legume-Dairy', 'Mixed', and 'Beverages'. The 'Cereal-Legume-Dairy' dietary pattern was significantly inversely associated with AGT after adjusting for HOMA-IR, fasting insulin, total cholesterol, triglycerides, LDL-cholesterol and HDL-cholesterol (adjusted odds ratio 0.517 [0.3-0.891],  $p=0.018$ ).

The 'Cereal-Legume-Dairy' dietary pattern, characterized by high intakes of cereal products (sago, breakfast cereals, oats and corn), legumes and dairy, was significantly associated with a reduced risk of AGT. Postpartum dietary intervention for women post-GDM is recommended to help in preventing or delaying their conversion to AGT.



## **The Effectiveness of a Six Month Hybrid Structured Weight Management Program (Mind-SLIMSHAPE™) During Pandemic COVID-19 Among Overweight and Obese Employees of a Public Institution**

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The prevalence of overweight and obesity among employees in Malaysia keeps increasing each year. Effective intervention for obesity at the workplace remains limited. Mindful training could be an effective strategy to optimize lifestyle behaviors related to weight loss, especially during the COVID-19 home confinement period when access to food is often unlimited. Our study aims to compare the effectiveness of a structured weight management program with mindful eating interventions (Mind-SLIMSHAPE™) among overweight and obese employees with a conventional dietary counseling program (CDP).

A total of 162 adults (BMI=32.0 ± 5.6 kg/m<sup>2</sup>; age=40.6 ± 7.3 years, 72% female) were randomly assigned to a 6-month Mind-SLIMSHAPE™ (n=83) or CDP (n=79) at a selected higher learning institution. Participants in the Mind-SLIMSHAPE™ group received six months of weekly intervention program (seven face-to-face before lockdown and 17 online sessions during lockdown) in which modules were delivered through talks, demonstrations, interactive activities, and hands-on activities, and exercise sessions, with the addition of mindful eating training. The CDP group received a weight management consultation from a dietitian in the first week of intervention. Both groups were followed up at 14 months after the intervention. Outcome measures collected at 0, 6, and 14 months included anthropometry and mindful eating practice. Data analysis was conducted using ANOVA repeated measures.

The retention rate of the Mind-SLIMSHAPE™ and CDP group at 6 month was 73.5% (n=61) and 83.5% (n=66). A total of 22 Mind-SLIMSHAPE™ participants (26.5%) have achieved a minimum weight loss of 5% at 6 month vs CDP. Participants from the Mind-SLIMSHAPE™ group had reduced their weight by 3.3% (-2.8 kg), BMI by 3.3% (-1.1 kg/m<sup>2</sup>), WC by 9.7% (-10.1 cm) and BF by 2.8% (-1.2%) as compared to controls of 0.5% weight loss (-0.4 kg), 0.6% (-0.2 kg/m<sup>2</sup>) BMI reduction, 1.9% (-1.9 cm) WC reduction and 0.5% (-0.2%) BF loss. These data are consistent with a recent study that showed a significant weight loss at 6 month of intervention in patients with type 2 diabetes involved in a web-based intervention during the lockdown period (Fraticeilli., 2020). Significant group-by-time interaction was found for weight (p<0.001), BMI (p<0.001), body fat (BF) percentage (p=0.034), and waist circumference (WC) (p<0.001) with changes favoring Mind-SLIMSHAPE™ over CDP at 6 month. These effects remain significant at 14-month follow-up. Rusali and colleagues (2016) reported similar findings in a 3-month intervention among employees of the petroleum industry in Malaysia. Although improvements were observed in the mindful eating practice score in the Mind-SLIMSHAPE™ group, these changes did not show significant effects when compared to the CDP group. In contrast, a mindful eating intervention for healthcare workers found a significant increase of the mindful eating practice scores after 5 weeks of intervention (Knol et al., 2020).

Our results show that in the workplace setting, the Mind-SLIMSHAPE™ intervention program effectively improved anthropometry measures in overweight and obese employees. Intervention studies may adopt a hybrid design in this endemic era as it allows intervention research to progress remotely and flexible access to intervention materials for the participants, especially for those working from home.





## List of Poster Presentation

### Undergraduate Student Case Study

#### SC01-13

##### Reversing the Risk of Malnutrition in Patient with Retrovirus Disease with Tuberculosis

Kylin N.1, Sarah KK.2, Nik Nur Izzati NMF.2, Alina IA.1, Pheh Huang S.1

1. International Medical University, Bukit Jalil
2. Hospital Tuanku Ja'afar Seremban, Negeri Sembilan

#### SC02-20

##### Nutrition Management on Wound Healing in Dementia Patient with Sacral Sore

Low Aileen1, Siti Nurhana Abd Wahid1, Dr. Nik Nur Izzati Binti Nik Mohd Fakhruddin2, Norazidah Binti Mahidin2

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2. Department of Dietetics and Food Service, Hospital Tuanku Jaafar, Negeri Sembilan, Malaysia

#### SC03-23

##### Fibre Composition for Diarrhoea in Enterally-Fed Patients

Aisha Eshak Harunani.1, Sarah Khalilah Kasa.2, Soh Pheh Huang.1, Alina Ita Azhar.1

1. Division of Nutrition & Dietetics, School of Health Sciences, International Medical University, Kuala Lumpur, Malaysia
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#### SC04-38

##### Feeding Initiation for Post-operative Cancer Patient with High Risk of Developing Refeeding Syndrome: Case Study

Lok L.X.1, Jazlina B.S.2

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2. Department of Dietetics, Hospital Pengajar Universiti Putra Malaysia

#### SC05-41

##### Nutritional Management for 18% TBSA Deep Dermal Burn Secondary to Thermal Injury

Batrysia Aileen Tan.1, Che Shafini Johari.2, Chin Yi Ying.1

1. School of Nutrition and Dietetics, Faculty of Health Sciences, Universiti Sultan Zainal Abidin, Gong Badak Campus
2. Department of Dietetics, University Malaya Medical Centre

#### SC06-42

##### Nutritional Management for Infected Sacral Sore Grade IV with Traumatic Spinal Cord Injury (SCI) T3 Asia Impairment Scale A Paraplegia Underlying Gouty Arthritis

Anis Syazwina Salman.1, Sarah Khalilah Kasa.2, Chin Yi Ying.1, Karimah Fakhriah Ismail.1, Nurul Zahidah Muhammad.1, Mariah Abd Ghaffar.1

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2. Department of Dietetics, Hospital Tuanku Ja'afar, Jalan Rasah

#### SC07-47

##### Nutritional Management of Ketogenic Diet in Morbidly Obese Adolescents

Nur Zahirah Abd Samad1, Muhammad Hazrin Husin2, Rokiah Ismail2, Chin Yi Ying1

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2. Department of Dietetics, University Malaya Medical Centre (UMMC)

#### SC08-61

##### A Case Study on the Nutritional Management of Colorectal Cancer with Total Abdominal Hysterectomy Bilateral Salpingo Oophorectomy (TAHBSO) And Low Anterior Resection with Covering Ileostomy.

Muhammad Farhan Hanif Norman 1, Sajida Ahmad Nasaruddin 1 (Supervising Dietitian)

1. Kulliyah of Allied Health Sciences, IIUM

#### SC09-71

##### Risk of Refeeding Syndrome for Critically Ill Patient

Shahirah Ayuni Anwar, Siti Azima Awang1

1. Universiti Sains Malaysia, Kubang Kerian, Kelantan.

#### SC10-73

##### Nutrition Management of Perforated Appendicitis with Poor Feeding Toleration.

Nur Ezzati Farhani binti Rosle1, Norhaishah binti Harun1, Muhaini binti Mahmud1, Yusmaeliza binti Istihat2

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#### SC11-75

##### **Enteral Feeding Management for Oliguric AKI With Fluid Restriction**

Safiah Tajuddin<sup>1</sup>, Tan Shy Pyng<sup>1</sup>, Aznida Juhari<sup>2</sup>

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2. Jabatan Perkhidmatan Dietetik & Sajian Makanan, Hospital Canselor Tuanku Muhriz UKM

#### SC12-76

##### **Transitional Feeding from Enteral Feeding to Oral in 19% TBSA Deep Dermal to Full Thickness in Elderly Patient: A Case Study**

Nur Ruzaireena binti Rahim<sup>1</sup>, Norhaishah binti Harun<sup>1</sup>, Yusmaeliza binti Istihat<sup>2</sup>

1. Dietetic Program, Universiti Kebangsaan Malaysia
2. Jabatan Dietetik dan Sajian, Hospital Kuala Lumpur

#### SC13-77

##### **Nutritional Management of NSTEMI With Underlying Ischemic Heart Disease, Recurrent Cerebrovascular Accident, Chronic Kidney Disease and Hypertension.**

Siti Nurezzatul Aqmar binti Sabri.<sup>1</sup>, Chin Yi Ying.<sup>1</sup>, Amira Nadiyah binti Abu Bakar.<sup>1</sup>

1. School of Nutrition and Dietetics, Faculty of Health Science, Universiti Sultan Zainal Abidin, Terengganu, Malaysia.

#### SC14-84

##### **A Month of Transitioning From Parenteral Nutrition: Steps to Successes! Transitional Feeding From Parenteral to Oral: Steps to Success!**

Muhammad Hazim A. 1, Nur Aqilah Binti H. 1

1. IIUM Kuantan Campus

#### SC15-101

##### **Nutritional Management Thrombocytopenia Due to Septic Shock**

Kok JD.1, NurZetty SZ.1, Siti AW.1

1. Universiti Sains Malaysia.

## Undergraduate Student Research Paper

#### SR01-9

##### **Parental Knowledge and Perception on Food Preference Amongst Malay Children in Klang Valley, Malaysia**

Lim KY.1, Yen PL.1, Yang WY.1, Ong SH.1

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University

#### SR02-19

##### **Knowledge, Attitude and Practice of Prophetic Food Consumption Among Undergraduate Students of Universiti Sains Malaysia, Health Campus, Kubang Kerian, Kelantan**

Shahirah Ayuni Anwar<sup>1</sup>, Wan Faizah Wan Yusoff<sup>1</sup>

1. Universiti Sains Malaysia, Kubang Kerian, Kelantan.

#### SR03-21

##### **e-Health Access and Practice of Dietitians in Malaysia- A Cross-Sectional Study**

Kauthar Faihanah R. 1

1. School of Health Sciences, Division of Nutrition and Dietetics, International Medical University (IMU), Kuala Lumpur, Malaysia.

#### SR04-34

##### **Association of Physical Activity and Sedentary Behaviour to Type 2 Diabetes Mellitus and Factors Affecting Physical Activity with Methods of Measurements in South and Southeast Asia: A Scoping Review**

Tunku Muhammad Bin Tunku Farahat Hussain.1, Winnie Chee.1,2, Lee Ching Li.1,2, Harvinder Kaur.1,2, Sangeetha Shyam.1,2, Lee Yi Yi. 1

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2. Centre for Transformative Nutrition and Health (CTNH), International Medical University

#### SR05-48

##### **IMU Food Handlers' Adherence to the Food Safety Criteria Before and After Food Safety Training Course**

Kuan K.K.L1

1. International Medical University

#### SR06-50

##### **Status of Healthy Cafeteria in International Medical University (IMU) Before and After the Healthy Cooking Training**

Liew RQ.1, Kuan KY.1, Kuan KKL.1, Ting LKC.1, Siah CY.1, Ng AK.1

1. International Medical University



**SR07-51**

**Food Preference of Malay Children Aged 7-12 Years Old in Malaysia: Comparison Between Child and Parent Report**

Lai EZ.1, Kee LX.1, Ho LT.1, Ong SH.2, Yang WY.1

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2. Institute of Research, Development and Innovative, International Medical University

**SR08-54**

**Content Quality Evaluation of Child Feeding Related Websites on Complementary Feeding in Malaysia**

Lim Zi Jie,1, Kanimolli Arasu,1, Chen Seong Ting,1

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical

**SR09-55**

**Nutritional Assessment Methods and Prevalence of Malnutrition in Children with Cerebral Palsy: A Systematic Review**

Mariyam Thaima MU.1, Ong SH.2, Chen ST.1

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University
2. Institute for Research, Development, and Innovation, International Medical University

**SR10-57**

**Nutritional Assessment and Prevalence of Malnutrition Among Children with Down Syndrome: A Systematic Review**

Farah Naqiyah R.1, Ong SH.2 and Chen ST.1

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University
2. Institute for Research, Development, and Innovation, International Medical University

**SR11-60**

**Positive Associations Between Child Eating Behaviour with Maternal Feeding Practices and Nutrients Intake in Malaysia**

Yang Wai Yew1, Kimberly Kong Kai Li1, Connie Ung Kee Lee1, Kanimolli Arasu1

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University

**SR12-62**

**Continuing Professional Development: A Survey on Participation and Perception Among Dietitians in Malaysia**

Heng SN.1, Jamilah AJ.1, Chee WSS.1,2, Barakatun-Nisak MY.2,3, Lapchmanan M.4

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University, Malaysia
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4. Allied Health Sciences Division, Ministry of Health, Malaysia

**SR13-63**

**Nutrient Estimation Skills of Undergraduate Nutrition and Dietetics Students in Malaysian Universities Using Food Images with and Without a Fiducial Marker (Dessert Spoon)**

Tay WN. 1, Tan Y.1, Yang WY.1, Ong SH.1

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical

**SR14-88**

**The Effectiveness of Food Safety Training on Food Safety Knowledge, Attitude, and Practice (KAP) Among Food Handlers in International Medical University (IMU)**

Kuan KY.1, Kuan KKL.1, Ting LKC.1, Liew RQ.1, Siah CY.1, Ng AK.1

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**SR15-90**

**Association of Job Stress Level and Eating Mindfulness Among Working Individuals During COVID-19 Pre-endemic**

Chai Joe Yi1, Kelly Num Sze Fang1, Snigdha Misra1

1. Division of Nutrition and Dietetics, School of Health Science, International Medical University Bukit Jalil

**SR16-92**

**The Influences of Omega-3 and Vitamin B on Brain Function: A Scoping Review**

Izzati Hidayah M.Z.1, Abdullah M.I.1\*, Nur Syazwana Athirah M.N.1, Nur Sakinah M.R.1, Ainun Fatimah M.M.1, Chin Y.Y.1

1. Faculty of Health Sciences, Universiti Sultan Zainal Abidin



#### SR17-94

##### **The Effects of Nutrition Education on Adults' Knowledge, Attitudes, and Practices**

Madhunishaa Puthan.1, Nor Hannah Aqila Bt Ab Hadi.1, Nur Syazwana Asma Binti Salim.1, Nurul Syahirah Binti Kamaruddin.1, Wani Syhasyha Binti Hj Mohammad Ja'afar.1, Mohd Ibrahim Abdullah.1, Chin Yi Ying.1

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#### SR18-95

##### **Halalan Toyibban Concept in Nutrition Perspective**

Sivabharathi Sivam.1, Mohd Ibrahim Abdullah.1, Nor Nabilah Binti Muhamad.1, Ain Syaquirah Binti Mohd Hisham.1, Tuan Norlis Dalisa Binti Tuan Omar.1, Nur Amirah Shakirah Binti Ahmad Rizal.1, Chin Yi Ying.1

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#### SR19-96

##### **Supplements to Combat COVID-19**

Nurfatin Najihah M. M. A.1, Mohd Ibrahim A.1, Nur Zakirah Z.1, Aainaa Nadhirah A.1, Afifah Nabihah C. R.1, Chin Y. Y.1

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#### SR20-100

##### **Association Between Body Image, Eating Behaviour, and Physical Activity Among Undergraduate Students of Health Sciences in Universiti Sains Malaysia.**

Kok JD.1, NurZetty SF.1, Divya V.1

1. Universiti Sains Malaysia

### Dietitians/Postgraduate Case Study

#### DC01-6

##### **Role of High Protein Diet in Glycogen Storage Disease (GSD) Type IIIa - Case Study**

Koh Bi Qi1

1. Hospital Kuala Lumpur

#### DC02-33

##### **Enhancing Role of Dietitians in Stroke Hospital - What Can We Do?**

Muhamad Ariff AR1, Nur 'Ain 'I2, Noraida O2, Nik Nor Haramaini NAG3, Nurul Farhana Z3 and Behiswari SR3

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2. Department of Dietetic, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia
3. Department of Rehabilitation Medicine, Hospital Pengajar Universiti Putra Malaysia

#### DC03-39

##### **Case Study: Intensive Medical Nutrition Therapy (MNT) For Weight Management in Patient with Metabolic Syndrome.**

Choo Wan Yee1

1. Dietetics Department, Thomson Hospital Kota Damansara

#### DC04-52

##### **Lactation in Obese Type 2 Diabetes Mellitus Patient**

Nur Atiqah binti Ali.1, Phang Chin Yi.1, Sarah Khalilah binti Kasa.2

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University
2. Jabatan Dietetik dan Sajian, Hospital Tuanku Ja'afar Seremban

#### DC05-53

##### **Feeding Challenges in Children with Special Health Care Needs: A Case Study**

Siti Nurhana Abd Wahid1, Dr. Nik Nur Izzati binti Nik Mohd Fakhruddin 2

1. Division of Nutrition and Dietetics, School of Health Sciences, International Medical University Bukit Jalil, Kuala Lumpur.
2. Department of Dietetics and Food Service, Hospital Tuanku Ja'afar, Negeri Sembilan.



**DC06-80**

**A Case Study of Malnutrition in Cerebral Palsy Adolescent**

Samirah Taufiq AW.1 and Fauziah B.1

1. Universiti Kebangsaan Malaysia

**DC07-99**

**Challenges of Nutrition Management for Persistent MRSA Bacteraemia With Septic Ileus and Restriction of Fluid: A Case Study**

Er YT 1, Jazlina S.2, Mohammad Nazirul Asri BH.2 and Mohammad AR.2

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2 Department of Dietetics, Hospital Pengajar Universiti Putra Malaysia

**Dietitians/Postgraduate Research Paper**

**DR01-4**

**Nutritional and Non-communicable Disease (NCD) Status Association with Fall Among Older Persons in Malaysia: Findings From National Health and Morbidity Survey (NHMS) Malaysia 2018**

Jayvikramjit Singh 1\*, Mohamad Fuad Mohamad Anuar 2, Azli Baharudin 1, Suhaila Abdul Ghaffar 1, Cheong Siew Man 1, Lalita Palineveloo 1, Syafinaz Mohd Sallehuddin 1, Nur Shahida Abd Aziz 1, Norsyamliana Che Abdul Rahim 1, Munawara Pardi 1, Nur Hamizah Nasaruddin 1 and Ahmad Ali Zainuddin 1

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2. Sector for Biostatistics and Data Repository, National Institutes of Health, Ministry of Health, Malaysia.

**DR02-8**

**Prevalence of Obesity and Its Associated Factors Among Elderly in Malaysia: Finding From the National Health and Morbidity Survey 2019**

Chong C.T.1, Lai W.K.1, Syafinaz M.S.1, Shubash S.G.1

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**DR03-12**

**Acute Effect of Formulated Melon Manis Terengganu Peel Powder on Glycemic Control: A Randomized Cross-Over Study in Adults at Risk of Type 2 Diabetes Mellitus**

Ying Qian O.1, Sakinah H.1, Norshazila S.2, Mohd Razif S.3, Hermizi H.4

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**DR04-16**

**Effectiveness of High Fiber Multigrain Supplementation Among the Rheumatoid Arthritis (RA) Patients: A Randomized, Open-Label Clinical Trial**

Farzana Athirah Abdul Latif.1, Wan Syamimee Wan Ghazali.2, Siti Mardhiana Mohamad.3, Lai Kuan Lee.1.

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3. Advanced Medical and Dental Institute, Universiti Sains Malaysia, Pulau Pinang, Malaysia

**DR05-18**

**Unserviced Meals in Malaysian Public Hospitals: How Much Food Is Being Wasted Beyond Patient Plate Waste?**

Nurul Alia Aqilah Samiun 1,2, Nurul Huda Razalli 1, Suzana Shahara 1, Zahara Abdul Manaf 1, Zurina Kefeli 3, Norshariza Jamhuri 4

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4. Dietetic and Food Service Department, National Cancer Institute, Malaysia.





**DR06-22**

**A Robust Evaluation of Nutritional Status, Serum Nutritional Biochemistry, and Hydration Status in Maintenance Haemodialysis Patients: A Single Centre Analysis of Sunway Medical Centre**

Ng Hi-Ming.1, Brenda Chong-Mei-Qi.1, Tia Yu-En.1, Ooi Jee-Cheng.1, Bee Swen-Yeen.1, Lau Wai-Hong.1, Krishnama Kumari.2

1. Dietetics and Nutrition Services, Sunway Medical Centre, Malaysia
2. Haemodialysis Department, Sunway Medical Centre, Malaysia

**DR07-26**

**Factors Influencing Dietary Adherence Among Caregivers of Children with Disorders of Amino Acid Metabolism: A Qualitative Study**

Jing Ying Lim1,2, Roslee Rajikan1\*, Noh Amit3, Nazlena Mohamad Ali4, Haslina Abdul Hamid5, Huey Yin Leong6, Maslina Mohamad7, Bi Qi Koh7 and Aini Musa8

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**DR08-29**

**Research Capacity Building Among Allied Health Professionals in the Ministry of Health Malaysia: An Empirical Study**

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**DR09-32**

**What Do Patients Say About JomSedia: An Online Diabetes Wellness Programme?**

Nor Aini J.1, Nur Fadzlin Syahira R.1, Tuti Ningseh M.D.2, Haslina R.2, Mohd-Said S.3, Nur Adila M.N.3 & Afendi H.4

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**DR10-36**

**Incidences of Clinical Nutrition Conditions Among National Athletes Referred to the Dietetics Clinic in 2021**

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**DR11-40**

**Development of a Study Protocol for Head and Neck Cancer Immunonutrition Supplementation Based on Findings of Systematic Review**

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3. Department of Clinical Oncology, University Malaya Medical Centre

**DR12-43**

**Development of MyManis Mobile App as a Digital Diabetes Prevention Intervention Among Women with or History of Gestational Diabetes Mellitus**

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**DR13-65**

**The Development, Implementation, and Efficacy Evaluation of Virtual Medical Nutrition Therapy Clinic for Pre-clinical Dietetic Students**

Charmaine L.1, Alina IA.1, Lee CL. 1, Mary EPME. 1, Teo SL.1, Winnie CSS. 1, Chen ST. 1

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**DR14-70**

**Eat Breakfast Like a King, Lunch Like a Prince and Dinner Like a Pauper: Does It Relevant in Weight Loss?**

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**DR15-72**

**High-Energy Candy as Supplement Choices for Sports Performance**

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**DR16-82**

**Dietary Glycemic Index and Glycemic Load and Their Association with Current Glucose Tolerance Status in Women With a History of Gestational Diabetes Mellitus**

Hannah I.1, Barakatun N.1, Farah Y.1, Chew B.H.1, Sangeetha S.2

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**DR17-83**

**Cardiometabolic Risk, Nutritional Status and Sugar Intake During COVID-19 Lockdowns Among a Sample of Malaysian Adults: An Online Survey**

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**DR18-87**

**A Qualitative Exploration of Participants' Expectations and Experiences in a Weight Management Programme**

Nur Syazwani A.1, Siti Kholijah K.1

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**DR19-89**

**Nutrient Intake Among Older Adults with Cognitive Frailty Residing in the Community**

Nurul Hidayah M. F.1, Suzana S.1, Roslee R.1, Devinder K. A. S.1, Divya V.2, Nazlena M. A.3

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**DR20-91**

**Factors Leading to Food Wastage in Malaysian Public Hospitals: A Qualitative Study**

Nurul Alia Aqilah Samiun1,2, Nurul Huda Razalli1, Suzana Shahar1, Zahara Abdul Manaf1, Zurina Kefeli3, Norshariza Jamhuri4

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**DR21-93**

**Knowledge, Attitudes and Practice of Mothers Towards Infant and Young Child Feeding Practice and Stunting: A Descriptive Study Among Mother-Child Dyads in Terengganu**

Tengku Fatin Nadhirah Te Ku Nor1& Bee Suan Wee1

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**DR22-97**

**A Qualitative Interview with the Dietetics Head of Department: What Management Skills Are Required for Training Module Development Among Dietitians?**

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## List of Dietitians Entrepreneur eShowcase

### DE01-10

#### **MyDietCam- A Malaysian Food Recognition-based Mobile Diet Application**

*Nadine Alvina Kong.1, Moy Foong Ming.1, Ong Shu Hwa.2, Ghalib Ahmed Tahir.3, Loo Chu Kiong.3*

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### DE02-44

#### **MyManis mobile app that support mothers with gestational diabetes mellitus and their healthcare professionals**

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