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# BRUNEI 2023

**ALZHEIMER'S DISEASE INTERNATIONAL  
ASIA PACIFIC REGIONAL CONFERENCE**

# Brunei International Medical Journal (BIMJ)

## Official Publication of The Ministry of Health and Universiti Brunei Darussalam

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The Brunei International Medical Journal (BIMJ) is a six-monthly peer-reviewed official publication of the Ministry of Health under the auspices of the Clinical Research Unit, Ministry of Health, Brunei Darussalam.

The BIMJ publishes articles ranging from original research papers, review articles, medical practice papers, special reports, audits, case reports, images of interest, education and technical/innovation papers, editorials, commentaries, and letters to the Editor. Topics of interest include all subjects that relate to clinical practice and research in all branches of medicine, basic and clinical including topics related to allied health care fields. The BIMJ welcomes manuscripts from contributors but usually solicits review articles and special reports. Proposals for review papers can be sent to the Managing Editor directly. Please refer to the contact information of the Editorial Office.

### INSTRUCTION TO AUTHORS

#### Manuscript submissions

All manuscripts should be sent to the Managing Editor, BIMJ, Ministry of Health, Brunei Darussalam; e-mail: bimjonline@gmail.com. Subsequent correspondence between the BIMJ and authors will, as far as possible be conducted via email quoting the reference number.

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Submission of an article for consideration for publication implies the transfer of the copyright from the authors to the BIMJ upon acceptance. The final decision of acceptance rests with the Editor-in-Chief. All accepted papers become the permanent property of the BIMJ and may not be published elsewhere without written permission from the BIMJ.

#### Ethics

Ethical considerations will be taken into account in the assessment of papers that have experimental investigations of human or animal subjects. Authors should state clearly in the Materials and Methods section of the manuscript that the institutional review board has approved the project. Those investigators without such review boards should ensure that the principles outlined in the Declaration of Helsinki have been followed.

### MANUSCRIPT CATEGORIES

#### Original articles

These include controlled trials, interventional studies, studies of screening and diagnostic tests, outcome studies, cost-effectiveness analyses, and large-scale epidemiological studies. The manuscript should include the following; introduction, materials

and methods, results, and conclusion. The objective should be stated clearly in the introduction. The text should not exceed 2500 words and references not more than 30.

#### Review articles

These are, in general, invited papers, but unsolicited reviews, if of good quality, may be considered. Reviews are systematic critical assessments of literature and data sources on clinical topics, emphasizing factors such as cause, diagnosis, prognosis,

therapy, or prevention. Reviews should be made relevant to our local setting and preferably supported by local data. The text should not exceed 3000 words and references not more than 40.

#### Special Reports

This section usually consists of invited reports that have a significant impact on healthcare practice and usually cover disease outbreaks, management guidelines, or policy statement papers.

#### Audits

Audits of relevant topics generally follow the same format as the original article and the text should not exceed 1,500 words and references not more than 20.

#### Case reports

Case reports should highlight interesting rare cases or provide good learning points. The text should not exceed 1000 words; the number of tables, figures, or both should not be more than two, and references should not be more than 15.

#### Education section

This section includes papers (i.e. how to interpret ECG or chest radiography) with the particular aim of broadening knowledge or serving as revision materials. Papers will usually be invited but well-written papers on relevant topics may be accepted. The text should not exceed 1500 words and should include not more than 15 figures illustrations and references should not be more than 15.

#### Images of interest

These are papers presenting unique clinical encounters that are illustrated by photographs, radiographs, or other figures. The image of interest should include a brief description of the case and a discussion of educational aspects. Alternatively, a mini quiz can be presented and answers will be posted in a different section of the publication. A maximum of three relevant references should be included. Only images of high quality (at least 300 dpi) will be acceptable.

### Technical innovations

This section includes papers looking at novel or new techniques that have been developed or introduced to the local setting. The text should not exceed 1000 words and should include not more than 10 figures illustrations and references should not be more than 10.

### Letters to the Editor

Letters discussing a recent article published in the BIMJ are welcome and should be sent to the Editorial Office by e-mail. The text should not exceed 250 words; have no more than one figure or table, and five references.

### Criteria for manuscripts

Manuscripts submitted to the BIMJ should meet the following criteria: the content is original; the writing is clear; the study methods are appropriate; the data are valid; the conclusions are reasonable and supported by the data; the information is important; and the topic has a general medical interest. Manuscripts will be accepted only if both their contents and style meet the standards required by the BIMJ.

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Designate one corresponding author and provide a complete address, telephone and fax numbers, and e-mail address. The number of authors of each paper should not be more than twelve; a greater number requires justification. Authors may add a publishable footnote explaining the order of authorship.

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**FRIDAY 27 OCTOBER 2023**

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#### **Session 1: Dementia Diagnosis, Treatment, Care and Support I.**

**10.00-11.30am. (Dewan Musyawarah)**

- [P1.](#) I am still able to live a fulfilling life despite dementia.**
- [P2.](#) Update on diagnosis, treatment and care in the Asia-Pacific.**

#### **Session 2: Dementia Diagnosis, Treatment, Care and Support II.**

**2.15-3.15pm. (Dewan Musyawarah)**

- [P3.](#) The convergence of stroke and dementia.**
- [P4.](#) Rehabilitation in dementia.**
- [P5.](#) Living with my mother's younger-onset dementia: Our second story.**

#### **Session 3: Dementia Risk Reduction.**

**3.15-4.00pm. (Dewan Musyawarah)**

- [P6.](#) Non-communicable disease burden and surveillance in Brunei Darussalam.**
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- [P8.](#) Mind, body and Ashwagandha: Exploring the mind-boosting benefits for ayurveda for reducing risk of dementia.**

### FEATURED BREAKOUT SESSIONS

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- [FBS1.](#) What you(th) can do.**

#### **Session 2: Stroke and Dementia. (Bilik Sepakat 3)**

- [FBS2.](#) Stroke and Dementia Forum.**
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#### **Session 3: Dementia risk reduction. (Bilik Sepakat 4)**

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- [\*\*W2.\*\*](#) Behavioural and psychological symptoms of dementia (Bilik Sepakat 3).
- [\*\*W3.\*\*](#) Unveiling the natural solutions: Ayurvedic remedies for dementia care (Bilik Sepakat 4).

### PLENARY SESSIONS

**Session 4: Dementia Awareness and Friendliness.**

**9:00 – 9:50am (Dewan Musyawarah)**

- [\*\*P9.\*\*](#) Dementia awareness and friendliness in the Asia-Pacific region.

**Session 5: Support for Dementia Carers.**

**9:50 – 10:30am (Dewan Musyawarah)**

- [\*\*P10.\*\*](#) La Kopi online peer support group.
- [\*\*P11.\*\*](#) How mindfulness can support family members of people living with dementia.

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**11:00 – 12:30pm**

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- [\*\*OP1.\*\*](#) Finding meaning in the moment: a workshop on applying mindfulness when affected by dementia.
- [\*\*OP2.\*\*](#) Art & dementia: Big Ones Little Ones.
- [\*\*OP3.\*\*](#) Music and dementia.

**Session 2: Dementia diagnosis, treatment, care and support. (Bilik Sepakat 3)**

- [\*\*OP4.\*\*](#) Diagnosis and biomarkers: Person-Centred Approaches in the Cognitive Assessment Process.
- [\*\*OP5.\*\*](#) Ageing brain vs dementia - Radiological assessment and biomarkers.
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[OP10.](#) **Identifying mental health risk factors and its association with psychological frailty among community-dwelling older adults: A pilot study.**

[OP11.](#) **Dementia knowledge of family caregivers in Indonesia.**

[OP12.](#) **Tackling ageism in the Caribbean.**

[OP13.](#) **Addressing the lack of correct dementia diagnosis in India: Bridging East and West.**

### [LUNCHTIME SYMPOSIUM](#)

**12:30 – 1:30pm (Bilik Sepakat 3)**

**Technology and dementia—Jeremy Lim, Quantum Leap Incorporation, Singapore**

### PLENARY SESSIONS

**Session 6: Dementia as a Public Health Priority.**

**1:30 – 2:30pm (Dewan Musyawarah)**

[P12.](#) **Living longer, ageing well.**

[P13.](#) **Community care for people living with dementia: Brunei perspective. Our path to the 'Basic act for dementia to promote the creation of an**

[P14.](#) **inclusive society' and the future issues in Japan.**

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**Session 4: Voices of Asia: An eBook project. (Dewan Musyawarah)**

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### ORAL PRESENTATIONS

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- [OP17.](#) Gaps in informal care networks among older adult Brunei-Malays: Implications for older adults with dementia.
- [OP18.](#) ECT-AD Study: A randomised controlled trial of electroconvulsive therapy plus usual care versus simulated-ECT plus usual care for the acute management of severe agitation in dementia.
- [OP19.](#) The relationship between beat-to-beat BPV and cognitive change over a six-year follow-up among community dwellers.

**Session 5: Support for dementia carers I. (Bilik Sepakat 4)**

- [OP20.](#) "Becoming a resourceful carer" - An in-house dementia care training programme developed for care staff in dementia day care settings in NTUC Health, Senior Day Care, Singapore.
- [OP21.](#) Placement of the Regional Facilitators of Dementia Policies and their Participations in E-learning courses.
- [OP22.](#) Preparation to implement the Indonesian version of the WHO iSupport module for people with dementia carers.
- [OP23.](#) Perspectives on the feasibility of the dementia iSupport manual in Brunei Darussalam.
- [OP24.](#) Intergenerational program initiatives with OMA in Indonesia.

**4:30 – 6:00pm**

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- [OP28.](#) Suicidality among caregivers of people with dementia in Malaysia.
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- [OP31.](#) Strengths and shortcomings of policies and support services for older persons with dementia in the GCC Arab region.**
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Session 7: Dementia Research and Innovation.

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[P17.](#) CARA: Building a dementia-inclusive society.  
[P18.](#) Digital health in promoting healthy ageing in Brunei Darussalam.  
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[OP35.](#) The chaotic Emergency Department (ED) and dementia patients: Strategies in ED to improve patient experience.  
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**[OP42.](#) Public awareness programme for physical disability and accessibility in Brunei Darussalam.**

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**[PP2.](#) COVID-19 vaccinations among Geriatric patients under home based nursing care in Brunei Darussalam.**

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**Theme: Dementia and Convention on Human Rights of Persons with Disabilities (CPRD).**

**[PP4.](#) The experience of people with dementia participating in CRPD reports easy read working group.**

**Theme: Dementia, human rights and equitable society.**

**[PP5.](#) Do not forget us or leave us behind: vulnerable people in a humanitarian crisis and palliative action plan for Garo Hills, Meghalaya.**

**Theme: Dementia policies and plans.**

**[PP6.](#) Framework for healthy ageing in Brunei Darussalam.**

**[PP7.](#) Dementia research blueprint for a dementia research framework in Brunei Darussalam.**

**Theme: Healthcare system readiness.**

**[PP8.](#) Prevalence of dementia in Acute Medical Unit wards.**

**[PP9.](#) Evaluation of service and cognitive scores of cases referred to BNSRC Clinical Psychology Unit.**

**[PP10.](#) Mealtime observational audit in Acute Medical Wards.**

**[PP11.](#) ICOPE implementation framework in Brunei Darussalam.**

**Theme: Dementia awareness and friendliness: Attitudes, awareness and stigma.**

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**[PP13.](#) Supporting Demensia Brunei: Engagement through community awareness.**

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[PP16.](#) Public-Private-People Partnerships for a dementia friendly outdoor spaces and buildings, transport and enablers for social participation.

**Theme: Dementia and design – environment, architecture.**

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[PP31.](#) The impact of mental health on cognitive functioning.

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[PP32.](#) Forget Me Not: Case Report.

[PP33.](#) Patient-centred health outcome measures for dementia in RIPAS Hospital, Brunei Darussalam.

[PP34.](#) A case report on dementia and cerebral amyloid angiopathy (CAA).

[PP35.](#) Prevalence and clinical profiles of mild cognitive impairment and dementia in Neuroscience Centre in Brunei Darussalam.

**Theme: Education and training for professionals and formal carers.**

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[PP40.](#) Recognising gaps in memory clinic referrals in Geriatric Medicine, RIPAS Hospital.

**Theme: Telemedicine.**

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[PP43.](#) Delirium screening in orthogeriatric patients using 4AT tool in RIPAS Hospital.

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[PP50.](#) Enhancing local and global palliative care: A two-year plan after a Fellowship in Palliative Care programme.

**Theme: Behavioural and psychological symptoms of dementia.**

[PP51.](#) Experiences and Challenges in Managing Behavioural and Psychological Symptoms of Dementia in hospital setting in Brunei.

**Theme: Well-being and quality of life.**

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**Theme: Support for dementia carers: Informal carer support.**

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[PP54.](#) The rationale behind the need to review existing local support for dementia carers.

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**Theme: Innovation, entrepreneurship and technology.**

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[PP59.](#) Assistive technologies to support dementia care: A literature review.

**Theme: International collaborations, challenges and opportunities.**

[PP60.](#) ASEAN Centre for Active ageing and Innovation (ACAI).

**Theme: Non-pharmacological interventions.**

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**Theme: Artificial intelligence.**

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[PP63.](#) ChatGPT and its potential utility for caregivers of people living with dementia.

[PP64.](#) Use of artificial intelligence in the practice of evidence-based medicine.





# BRUNEI 2023

## ALZHEIMER'S DISEASE INTERNATIONAL ASIA PACIFIC REGIONAL CONFERENCE

### PLENARY SESSIONS

#### Session 1: Dementia Diagnosis, Treatment, Care and Support I:

27<sup>th</sup> October 2023 10:00 – 11:30am  
(Dewan Musyawarah)

#### P1. I am still able to live a fulfilling life despite dementia.

Emily Ong<sup>1-3</sup>

<sup>1</sup>Alzheimer's Disease International Board Member.

<sup>2</sup>Dementia Alliance International Environmental Design SiG.

<sup>3</sup>Dementia Singapore Voices for Hope.

When I was diagnosed with young-onset dementia (YOD) in 2017 there was hardly any local awareness of YOD, much less to say, support for working aged people diagnosed with dementia. After I got over the grief of the 'loss' that I experienced in the initial two years, I decided to put my lived experience into good use that will benefit others so that they do not feel alone and unsupported. I created a Facebook account under "Living with mild cognitive impairment and YOD" in 2019 to talk about my life with dementia and how I helped myself to maintain my functioning and independence. I soon realised that my lived experience could act as a powerful story-telling tool to support others with dementia and others working in healthcare and dementia care. Since then, I embarked on the advocacy journey with the call for action to change the dementia narrative and include

people with dementia in everyday life and community participation. People with dementia might need extra support but it should not be perceived as they are incapable.

#### P2. Update on diagnosis, treatment and care in the Asia-Pacific.

Susan Kurrle<sup>1</sup>, Norazieda Yassin<sup>2</sup>, Maw Pin Tan<sup>3</sup>, Michelle Anlacan<sup>4</sup>

<sup>1</sup>Faculty of Medicine and Health, University of Sydney, Sydney, New South Wales, Australia.

<sup>2</sup>Department of Neurology, Pantai Jerudong Specialist Centre, Brunei Darussalam

<sup>3</sup>Division of Geriatric Medicine, Department of Medicine, University of Malaya, Kuala Lumpur, Malaysia.

<sup>4</sup>Department of Neurosciences, College of Medicine, Philippine General Hospital, University of the Philippines, Manila, Philippines.

In this session, invited speakers from the Asia-Pacific (Australia, Brunei, Malaysia and Philippines) will share about the current status of clinical services in terms of diagnosis, treatment, care and post-diagnostic support in their locality to meet the clinical needs of people with dementia. Strengths and challenges experienced in each service as well as experiences or considerations of implementing novel biomarkers and monoclonal antibodies are discussed.

**Session 2: Dementia Diagnosis, Treatment, Care and Support II:**

**27<sup>th</sup> October 2023 2:15 – 3:15pm  
(Dewan Musyawarah)**

**P3. The convergence of stroke and dementia.**

**Nurashikin Tengah.**

**Department of Neurology, Pantai Jerudong Specialist Centre, Brunei Darussalam.**

More than half of the world population lives in Asia, mainly in developing countries, where stroke remains the biggest contributor to DALYs lost. In 2015 the World Stroke Association issued a proclamation calling for the joint prevention of stroke and dementia. The connections between stroke and dementia are multiple and interactive and therefore at present, treatments aimed at mitigating stroke risk provide our most promising opportunity to reduce rates of both. This talk discusses some of the vascular mechanisms for cognitive impairment as well as strategies targeting vascular risk that may reduce cognitive decline.

**P4. Rehabilitation in dementia.**

**Ian Cameron.**

**Faculty of Medicine and Health, University of Sydney, Sydney, New South Wales, Australia.**

The World Health Organisation has published a package of interventions for rehabilitation for dementia. The presentation will overview that publication and also consider rehabilitation for people with dementia who sustain common conditions including hip fracture and stroke.

**P5. Living with my mother's younger-onset dementia: Our second story.**

**Ren Yamanaka.**

**Second Story Corporation.**

I am Ren Yamanaka from Kochi Prefecture, Japan. In 2019, my mother, Shinobu, was diagnosed with younger-onset Alzheimer's disease when she was 41. I was 18 at that time. In those days, I did not understand my mother's illness, and I was frustrated by her forgetfulness and asking me the same thing over and over. I now understand and accept my mother's condition and am less frustrated with her. Even so, I get angry at her sometimes. But I think bickering is natural for family members and may be necessary. In 2022, Shinobu and I established a day-care centre, "Happy," collaborating with many people. "Happy" is not only a day facility to provide care but also advocates for the right to work and social inclusion of people living with dementia. This is our mission, which comes from her experience and aspiration as a person living with dementia. Rather than lump all the members together, our policy is to respect each person's wishes and support them in realising these.

I will talk about my experience as a son of a mother living with dementia, my relationship with her, our present and future activities, and my thoughts about Alzheimer's disease. Through this presentation, I hope I can interact with my peers who have a parent with younger-onset dementia.

**Session 3: Dementia Risk Reduction:**

**27<sup>th</sup> October 2023 3:15 – 4:00pm  
(Dewan Musyawarah)**

**P6. Non-communicable disease burden and surveillance in Brunei Darussalam**

**Sok King Ong<sup>1-3</sup>**

**<sup>1</sup> Department of Environmental Health Sciences, Ministry of Health, Brunei Darussalam.**

**<sup>2</sup> PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**<sup>3</sup> JCSPHPC, Faculty of Medicine, Chinese University of Hong Kong.**

**Background:** Dementia is closely linked to noncommunicable diseases (NCDs) risk factors, many of these factors are related to cardiovascular diseases and are modifiable. NCDs account for approximately two-thirds of premature mortality in Brunei. The probability of premature death from NCDs among individuals aged 30 to 70 years in Brunei was estimated to be 19%, while the probability is about 9% for other high-income countries in the region.

**Methods:** National health survey on NCD risk factors surveillance were conducted on 5-year intervals among adult populations in Brunei. They were conducted in 2011, 2016 and 2022 using stratified sampling methodology to ensure national representative data was collected, also adopting WHO's STEPwise methodology for NCD risks surveillance for the surveys in 2016 and 2022.

**Results:** A significant proportion of Brunei adults were found to have NCD risk factors. About 36% of men reported smoking regularly, 94% of young adults aged 18 to 29 years old did not meet the recommended fruits and vegetables consumption, 33% of females reported insufficient physical activity, 28% of adults had BMI $\geq$ 30 or obesity. 30% of men had hypertension and about 60% of those with hypertension were either undetected or untreated.

**Conclusion:** NCD risk factors pose a significant public health challenge in Brunei. The findings from national health surveys underscore the urgency of addressing NCD associated risk factors. A significant proportion of individuals at risk of NCDs were unaware, undiagnosed, or untreated for their condition. Both population strategies and targeted group interventions are required to effectively control NCDs risk factors and reduce the associated mortality and morbidity.

## References

1: Noncommunicable diseases progress monitor 2022. Geneva: World Health Organization; 2022.

2: Cross-sectional STEPwise Approach to Surveillance (STEPS) Population Survey of Noncommunicable Diseases (NCDs) and Risk Factors in Brunei Darussalam 2016. *Asia Pac J Public Health.* 2017;29(8):635-648. doi: 10.1177/1010539517738072.

## P7. Community dementia screening in Brunei Darussalam.

**Nadzirah Rosli.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**Background:** Brunei has a high prevalence rate of non-communicable diseases which are risk factors for dementia but a low rate of dementia diagnosis. Dementia screening was performed to identify the prevalence of risk factors and symptoms in the community.

**Methods:** This study was a community survey with cluster sampling of older people aged 60 years and above or those aged 50 years and above with risk factors for developing dementia. Participants were recruited from the community based on where older people or people with risk factors could be reached. Participants were given a questionnaire regarding risk factors, symptoms, whether there were indications of concern and a brief cognitive assessment tool (Mini-COG).

**Results:** There were 1962 participants screened in locations such as Senior Citizen Activity Centres, Health Centres, marketplaces, public awareness and screening booths and talks, village head pension collections, dialysis centres, RIPAS hospital and various government departments or ministries. There were 1358 participants who met inclusion criteria. Median age was 60 and two-thirds were female. Approximately three quarters had at least primary school education. The common risk factors were hypertension (65.7%), high cholesterol (53.2%), diabetes mellitus (35.6%) and kidney disease (17.3%). The common symptoms of demen-

tia were misplacing things (42.6%), memory loss or forgetfulness (32.5%), visuospatial difficulties (24.2%) and mood or behaviour changes (20.8%). Among those with symptoms 14.5% thought they were getting worse, while 12% thought the symptoms affected their activities of daily living (ADLs). Based on the Mini-COG, 14.5% of the participants had possible cognitive impairment.

**Conclusion:** There was a high rate of dementia symptoms and risk factors identified. A public health approach to raise awareness of dementia symptoms and strengthening of dementia risk reduction measures is warranted in Brunei Darussalam.

**P8. Mind, body and Ashwagandha: Exploring the mind-boosting benefits for ayurveda for reducing risk of dementia.**

**Jyoti Anilkumar Jha.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

Dementia is an umbrella term describing a range of neurological conditions affecting the brain, which gets worse over time. It involves multiple cognitive domains and deficits, leading to significant impairment in social and occupational functioning. This can be distressing for the person and their families, while care can be economically burdensome for affected individuals and family members.

Alzheimer's disease, the most common type of dementia, is the 'plague of the twenty-first century', affecting many older people globally. This rise calls for finding a cure or efficient methods to prevent, manage and minimise its proliferation. Current treatment is limited to managing symptoms, while there is no treatment to prevent progression and reverse pathology of this disease. There is an immediate need to identify and develop safe therapies to manage this condition.

This review discusses a multitude of treatments borrowed from Ayurveda which finds its roots in India. This preventive medi-

cation system may delay the onset of ageing and ailments associated with it. These are used in practice since ancient times and reported to be beneficial in dementia. Ayurveda herbs mainly Ashwagandha, Brahmi, Shankhpushpi and Turmeric are extensively researched upon to demonstrate their efficacy in preclinical and clinical trials. These work mainly by acting on reactive oxygen species and oxidative stress injury by antioxidant, immunomodulation and neuro-protective mechanisms.

Neuroprotective herbs like Ashwagandha may have a place for preventing and treating dementia, and used as complementary alternative medicine for people with dementia.

**Session 4: Dementia Awareness and Friendliness:**

**28<sup>th</sup> October 2023 9:00 – 9:50am  
(Dewan Musyawarah)**

**P9. Dementia awareness and friendliness in the Asia-Pacific region.**

**Maree McCabe<sup>1</sup>, Michael Maitimoe<sup>2</sup>, Debbie Chen<sup>3</sup>.**

<sup>1</sup> **Dementia Australia.**

<sup>2</sup> **Alzheimer's Indonesia.**

<sup>3</sup> **Taiwan Alzheimer's Disease Association.**

This session aims to showcase initiatives on raising dementia awareness and friendliness in the Asia-Pacific. The three associations invited to share in this plenary session were Dementia Australia, Alzheimer's Indonesia (ALZI) and Taiwan Alzheimer's Disease Association (TADA).

**Session 5: Support for Dementia Carers:**

**28<sup>th</sup> October 2023 9:50 – 10:30am  
(Dewan Musyawarah)**

**P10. La Kopi online peer support group**

**Emily Ong<sup>1-3</sup>**

**<sup>1</sup>Alzheimer's Disease International Board Member.**

**<sup>2</sup>Dementia Alliance International Environmental Design SiG.**

**<sup>3</sup> Dementia Singapore Voices for Hope.**

While peer support by and for people living with dementia is widely available in European countries, the United States and Canada, and also in Australia and Japan, it is hardly heard of in most countries including Singapore. The 'La Kopi' peer support is a weekly online social interaction space by and for people with dementia to get together, enabling them to talk about their lives and how to live with dementia. The initiative was started in August 2021 by Emily Ong, a dementia advocate living with young-onset dementia in response to the call for help from one of her peers living with young-onset Alzheimer's Disease during the Covid-19 restriction in Singapore. Many people living with dementia were seriously impacted by the social restriction which caused disruption to their social interactions at various activity centres. Since then, Emily has been hosting the weekly Tuesday "La Kopi" for her peers and incorporated a multi-domain lifestyle intervention approach to maintain the overall vascular health, social-emotional wellbeing and functioning of her friends.

**P11. How mindfulness can support family members of people living with dementia**

**Eva van der Ploeg<sup>1,2</sup>**

**<sup>1</sup> Soulful Brain, Bali, Indonesia**

**<sup>2</sup> Leiden University Medical Centre, Leiden, Netherlands**

Mindfulness is often seen as a methodology where you have an empty mind, little emotions and no problems. This is far from the truth and even sounds impossible as well as undesirable: an empty mind. This presentation shares what mindfulness is in a nutshell and how it can assist people who are related

to and care about a person who lives with dementia. Illustrated by a concrete example, we explore how mindfulness can change the dynamics when challenges occur.

**Sessions 6: Dementia as a Public Health Priority:**

**28<sup>th</sup> October 2023 1:30 – 2:30pm (Dewan Musyawarah)**

**P12. Living longer, ageing well.**

**Andrew Larpent.**

**Commonwealth Association for the Ageing.**

Andrew Larpent has worked with, lived with and supported people with dementia for the past 22 years. He has been involved in leadership roles in service design, workforce training, healthy ageing and leadership development in the field in the UK and Australia, and has travelled extensively around the world investigating international approaches to dementia care and support services. He will share thinking on his principle interest - the preservation of dignity and personhood in persons living with dementia and in emerging models of psycho-social support including artificial intelligence and reminiscence therapy.

**P13. Community care for people living with dementia: Brunei perspective.**

**Muhammad Nurhasanuddin Abdullah Keli.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

Brunei maintains a unique approach towards caring for its residents living with dementia, placing a significant emphasis on the foundational role of family institutions. This cultural perspective has been deeply embedded in Bruneian tradition and societal values. It signifies the integral role families play in offering emotional, physical, and psychological care

for their affected loved ones. The Bruneian government, recognising the importance of this familial caregiving system, has been a staunch supporter, promoting and endorsing such practices through policies and initiatives.

Complementing the primary care from families, Brunei boasts an array of supplemental services designed to further alleviate the burden on dementia patients and their caregivers. These services, a joint effort by governmental and non-governmental organisations, span a wide spectrum. From monetary assistance to in-kind contributions, and even hands-on personal care, these supports aim to holistically cater to the diverse needs of this demographic.

Despite these comprehensive measures, Brunei stands at a crossroads. The rapid sociocultural changes, combined with shifting family and community dynamics, pose tangible challenges to the care system. The traditional larger family units are slowly giving way to nuclear families, leading to potential gaps in continuous caregiving. This transformation necessitates a fresh perspective and adaptive strategies.

In the face of these challenges, it is of paramount importance for Brunei to innovate and adapt. Crafting novel methods and frameworks to support its dementia-afflicted and ageing population will ensure that they continue to receive compassionate and efficient care, even amidst changing societal landscapes.

**P14. Our path to the 'Basic act for dementia to promote the creation of an inclusive society' and the future issues in Japan.**

**Noriyo Washizu.**

**Alzheimer's Association Japan.**

Japan is the most aged country in the world, with 30 % of the population being elderly and one in five of this group having dementia. Given the above, the "Basic Act for Dementia to Promote the Creation of an Inclusive Soci-

ety" was unanimously passed in June 2023. This Act assures central/local governments' responsibility for building an inclusive society and respecting the dignity of people living with dementia. The Act is based on "The National Framework for Promotion of Dementia Policies" implemented in 2019, including more practical measures to realise the Framework. The Act resulted from the collaboration of policymakers, stakeholders, multi-sector experts, and the general public. It took more than 50 years of effort to reach the Act. However, this Act is not a goal but a starting point. Sharing the fifty-year experience of the national dementia policy and measures in Japan and the challenges Japan faces will be of some help for the countries currently ageing or in the future. This presentation includes the history of the dementia policy in Japan, an overview of the Basic Act, and the present and future challenges in Japan.

**Session 7: Dementia Research and Innovation:**

**29<sup>th</sup> October 2023 9:00 – 10:30am  
(Dewan Musyawarah)**

**P15. Dementia: Population health and service development.**

**Ian Cameron.**

**Faculty of Medicine and Health, University of Sydney, Sydney, New South Wales, Australia.**

More than 30 countries now have national dementia plans. The World Health Organisation has a "global action plan on the public health response to dementia 2017-2025". The presentation will review the global action plan and provide specific examples from several national dementia plans.

**P16. Physical comorbidities of dementia.**

**Susan Kurrle.**

**Faculty of Medicine and Health, University of Sydney, Sydney, New South Wales,**

## **Australia.**

There are a number of conditions that occur more commonly in people with dementia than in those of the same age without dementia. Whilst there is a lot of focus on the cognitive and behavioural symptoms of dementia, the physical side of dementia has been neglected. This presentation looks at the conditions of epilepsy, delirium, falls, oral disease, malnutrition, frailty, incontinence, sleep dysfunction and visual problems which all occur more commonly in people with dementia than in those without dementia. It briefly discusses how they present and how they can be managed.

## **P17. CARA: Building a dementia-inclusive society.**

**Stephen Chan.**

**Dementia Singapore.**

CARA is a lifestyle and community digital platform that provides easy access for persons living with dementia and caregivers to connect to an ecosystem of solutions via a mobile application. It is a catalyst for creating a **C**ommunity of like-minded people to drive conversation and spark initiatives that will enable persons living with dementia and their caregivers to lead meaningful and purposeful lives in Singapore. CARA provides **A**ssurance that persons living with dementia can continue to move freely and independently within a safe community, giving caregivers greater peace of mind. Members will enjoy tailored **R**ewards from our selected partners who share our vision. This initiative advocates for inclusion and facilitates a dementia-ready future so that persons living with dementia and their caregivers feel respected, supported, and **A**ccepted by society. As part of Dementia Singapore's key initiative, CARA will partner with organisations, caregivers, and systems to strengthen the overall effectiveness of the dementia care ecosystem – a dementia-inclusive society.

## **P18. Digital health in promoting healthy ageing in Brunei Darussalam.**

**Siti Munawwarah Hj Md Tarif.**

**Health Promotion Centre, Ministry of Health, Brunei Darussalam.**

Brunei Darussalam is experiencing a rapid increase in the ageing population aged 60 and over. The national population census in 2022 identified that 10.1% comprised older people and it is predicted that the ageing population will reach 14% by 2036 and 28.7% by 2050. The use of digital technology becomes a crucial platform to promote healthy ageing and fulfil the needs of older people. The significant use of digital technology has increased since the COVID-19 pandemic and has led to a demand for digital solutions across the population. Older people have started to learn and adapt to the new norm of digitalisation including using technology to assist with their daily living. Brunei Darussalam is fully committed in its efforts to build an inclusive digital society through a whole-of-government approach in focusing on healthy ageing by enabling a more conducive digital environment for all age groups.

## **P19. Forging ahead: the vital role of the Centre for Advanced Research (CARE) in promoting active and healthy ageing.**

**Siti Madizah Haji Mohamad.**

**Centre for Advanced Research (CARE), Universiti Brunei Darussalam, Brunei Darussalam.**

This presentation spotlights the pivotal role played by the Centre for Advanced Research (CARE) at Universiti Brunei Darussalam (UBD) in championing active and healthy ageing and advancing ageing research within Brunei. CARE underscores the profound importance of research and innovation in addressing the evolving needs of an ageing population. Within the ambit of its research cluster, Health and Ageing, the centre has consistently undertaken multidisciplinary re-

search endeavours aimed at comprehending the various facets of ageing lifestyle. This research spans considerations of health and well-being, economic aspects, and socio-cultural perspectives, all with the overarching goal of enhancing the overall quality of life for the elderly population. This presentation provides a glimpse into several of the projects initiated by the Centre. These include the comprehensive National Study on the Elderly Population (NSEP) in Brunei, investigations into Health and Life Satisfaction, and assessments of Financial Adequacy among older adults. Alongside these research efforts, researchers at the Centre actively engages in community-based projects that focus on building intergenerational relationships, enhancing physical mobility, and fostering greater social inclusion among the elderly population. These initiatives collectively contribute to the holistic and beneficial advancement of ageing research and the well-being of the ageing community in Brunei. Furthermore, this presentation also outlines future research directions, demonstrating CARE's commitment to continually addressing the evolving challenges and opportunities presented by an ageing population. These future directions include exploring emerging issues in elderly care, developing innovative solutions to enhance ageing-in-place initiatives, and further studying the societal and economic impact of active and healthy ageing in Brunei. The Centre's dedication to advancing research in the field remains steadfast, ensuring the well-being and quality of life for the elderly in Brunei.

#### **WORKSHOPS**

**28<sup>th</sup> October 2023 8:00 – 9:00am**

**W1. Advocacy and public policy for dementia (Dewan Musyawarah)**

**W2. Behavioural and psychological symptoms of dementia (Bilik Sepakat 3)**

**W3. Unveiling the natural solutions:**

#### **Ayurvedic remedies for dementia care (Bilik Sepakat 4)**

**W1. Advocacy and public policy for dementia.**

**Glenn Rees.**

**Alzheimer's Disease International.**

This session is a masterclass on public policy and advocacy based on Glenn's experience of over 20 years of advocacy in ADI and Australia.

**W2. Behavioural and psychological symptoms of dementia.**

**Fariza Sani<sup>1</sup>, Norshahzuani Hj Azaman<sup>2</sup>, Tan Joo Lee<sup>3</sup>.**

**<sup>1</sup> Department of Psychiatry Services, RI-PAS Hospital, Brunei Darussalam.**

**<sup>2</sup> Division of Clinical and Community Psychology, Ministry of Health, Brunei Darussalam.**

**<sup>3</sup> Caregiver of a person with dementia.**

Behavioural and Psychological Symptoms of Dementia (BPSD) are symptoms of disturbed perception, thought content, mood or behaviour, frequently occurring in patients with Dementia. These are also known as behavioural disturbances, non-cognitive symptoms or neuropsychiatric symptoms of Dementia. BPSD is a ubiquitous feature of Dementia and can be distressing for both patient, family and caregivers as well as healthcare staff. BPSD is often associated with increased rates of institutionalisation, faster rate of decline with increased mortality, higher rate of complications in hospital, being physically restrained and increased cost of care.

BPSD has a multifactorial aetiology, including biological (intrinsic and extrinsic), psychosocial, interpersonal and environmental factors. Management of BPSD can be quite challenging and thus require a more holistic and multidisciplinary approach. Family and caregivers have significant roles to plan and these should be incorporated into the overall



management.

The workshop will be facilitated by a Psychiatrist, Psychologist and caregiver. Strategies of assessing and managing BPSD will be outlined and discussed. There will also be a sharing session on lived experience from the perspective of the caregiver of a patient with BPSD.

**W3. Unveiling the natural solutions: Ayurvedic remedies for dementia care.**

**Jyoti Anilkumar Jha.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

Dementia is an umbrella term, describing a range of neurological conditions affecting brain function, which worsens over time. It involves multiple cognitive domains and deficits, leading to significant impairment in social and occupational functioning, which can be distressing for the person and their families. Alzheimer's disease is the most common type of dementia. The expected rise calls for more effective approaches to prevent this condition.

In this workshop, ayurvedic concepts and principles will be described and applied to dementia. Preventive approaches will be described as part of an integrative approach, including lifestyle modification, nutrition (brain healthy diet), yoga for cognitive health, medication (brain exercise and stress management), external and internal therapies and herbs (neuroprotective and neurodegenerative properties).

Ayurveda's remedies for dementia care can be considered as part of a holistic approach, with a need to ensure evidence-based practices.

**WORKSHOPS**

**29<sup>th</sup> October 2023 8:00 – 9:00am**

**W4. ICOPE and cognitive capacity (Bilik**

**Sepakat 3)**

**W5. Understanding key concepts in mental capacity assessments (Bilik Sepakat 4)**

**W4. ICOPE and cognitive capacity.**

**Shyh Poh Teo<sup>1,2</sup>, Peach Wattanavitukul<sup>3,4</sup>.**

<sup>1</sup>**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

<sup>2</sup>**PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam**

<sup>3</sup>**Alzheimer's and Related Disorders Association of Thailand.**

<sup>4</sup>**Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Thailand.**

The World Health Organisation (WHO) has developed the Integrated Care for Older People (ICOPE) guidance for person-centred assessment and pathways in primary care. This enables community health and care workers to set patient-centred goals, screen for reduced intrinsic capacity across multiple domains, assess health and social care needs, as well as develop a personalised care plan. The domains of intrinsic capacity include cognitive decline, limited mobility, malnutrition, visual impairment, hearing loss and depression. In this workshop, an overview of the ICOPE approach will be provided, followed by a focused discussion on cognitive capacity.

**W5. Understanding key concepts in mental capacity assessments.**

**Donald Yeo.**

**KALL Psychology Clinic, Singapore.**

Mental capacity is the ability to make a decision. Capacity is dynamic and a specific function in relation to the decision to be taken. If a person lacks capacity, they have an impairment or disturbance that leaves them unable to make a decision. The loss of capacity could

be permanent, partial or temporary. It is possible for a person to lack capacity to make one specific decision but not about another. This workshop provides an overview of the Mental Capacity Act (2008) and the Vulnerable Adults Act (2018) in Singapore. The MCA is designed to provide a regulatory framework in which a person does not have the capacity to make a decision for himself. The VAA makes provision for the safeguarding of vulnerable adults from abuse, neglect or self-neglect. Participants attending this workshop are guided to explore the fundamental principles in conducting these assessments and consider medicolegal contexts and appropriate reasons for such assessment referrals, with case discussions.

#### **LUNCHTIME SYMPOSIUM**

**28<sup>th</sup> October 2023 12:30 – 1:30pm (Bilik Sepakat 3)**

##### **Technology and dementia.**

**Jeremy Lim.**

**Quantum Leap Incorporation, Singapore.**

Amidst a rapidly ageing population and a growing number of individuals living in solitude, we are confronted with the complex task of expanding care-giving services. The scarcity of available workforce, combined with the reluctance to engage in geriatric environments and the alarming burnout rates among family caregivers, further compounds these challenges.

This topic will present the reasons behind embracing proven smart technologies as a cost-effective solution, providing security for seniors and relieving caregiver burdens in diverse settings. Furthermore, it will delve into how the exploration of integrating machine learning models in smart healthcare holds promise for early detection of health issues in isolated elderly individuals, enabling timely intervention. Through the synergistic integration of technology and compassionate

care, we endeavour to establish smarter and safer places for our seniors to live in.

#### **FEATURED BREAKOUT SESSIONS:**

##### **Session1: Youth Engagement.**

**27<sup>th</sup> October 2023 4:30 – 6:00pm  
(Dewan Musyawarah)**

##### **FBS1. Youth engagement: What you(th) can do.**

**Fatin Aimuni binti Hj Suffian<sup>1</sup>, Fatin Ari-fin<sup>2</sup>, Pg Hj Ahmad Fadillah Akhbar Pg Hj Sellahuddin<sup>3</sup>, Noor Hafizah Rashid<sup>4</sup>.**

<sup>1</sup> **CIC Group.**

<sup>2</sup> **Young Professional Network.**

<sup>3</sup> **Projek FEED.**

<sup>4</sup> **Big Bwn Project.**

The Youth Engagement is a talkshow style discussion focusing on the topic of "What You (th) Can Do?" It is a dynamic platform dedicated to empowering the youth and promoting community engagement.

This talkshow is not just about discussions; it's about action, impact, and change. Our vibrant team of young volunteers is committed to creating unity and raising awareness on active community.

##### **Session 2: Stroke and Dementia.**

**27<sup>th</sup> October 2023 4:30 – 6:00pm (Bilik Sepakat 3)**

##### **FBS2. Stroke and Dementia Forum.**

**Anas Naomi DP Hj Harun<sup>1</sup>, Anni@ Nik Ani Afiqah Hj Mohamad Tuah<sup>2</sup>, Mona Irmiana Dato Paduka Hj Mohd Alimin<sup>3</sup>.**

<sup>1</sup> **Neurology Department, Pantai Jerudong Specialist Centre, Brunei Darussalam.**

<sup>2</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam.**

<sup>3</sup> **Rehabilitation Department, Pantai Jerudong Specialist Centre, Brunei Darussalam.**

This forum aims to highlight the co-existence of stroke and dementia especially with the huge burden of stroke in the Asia-Pacific region considering more than half of the world population lives in Asia, mainly in developing countries. The impact of stroke in this region includes decreased quality of life and higher average mortality rate compared to Europe and America. Post-stroke cognitive impairment can affect up to one-third of stroke survivors and has become a significant public health concern that is often neglected despite its increasing prevalence. The panel will explore some of the challenges with regards to the diagnosis and management of people with both stroke and dementia as well as discuss what can be done to mitigate this.

The forum discussion will start with an oral abstract presentation followed by panel discussion.

**FBS3. An audit of 1 year prevalence of MCI and dementia post-stroke.**

**Dk Nurul Hazimah Binti Pg Mohin, Nurul Zafirah Binti Hj Awg Mahli, Kyaw Zay, Pg Hjh Siti Nur'Ashikin Binti Pg DP Hj Tengah.**

**Brunei Neuroscience Stroke & Rehabilitation Centre (BNSRC), Pantai Jerudong Specialist Centre (PJSC), Brunei Darussalam.**

The Global Burden of Disease study (2019), projected a significant rise in dementia cases in Brunei from 1574 to 7317 cases by 2050. 20% of stroke patients develop dementia and 40% exhibit mild cognitive impairment (MCI) within one-year post-stroke according to the Sydney Stroke Study. The progression from MCI to dementia post-stroke is primarily attributed to multiple stroke events. Other risk factors include smoking, high body mass index and diabetes. There is no previous study of post-stroke dementia in Brunei. The objective of this study was to audit the documentation of dementia and MCI in the electronic health record of a cohort of patients one year

after stroke. 326 stroke patients admitted from 1st January to 31st December 2020 were identified from BNSRC stroke list. Case notes were reviewed for demographics, diagnosis of dementia/MCI and utilisation of cognitive assessment tools. Patients' mean age was 61 years (male 201, female 125). Only 200 had one-year follow-up documentation of which 5% and 23% were diagnosed with dementia and MCI respectively. However, cognitive assessment tools were administered to less than 55% of diagnosed patients. There was a higher prevalence of CI in men, with male-to-female ratio of 1.62. Identified risk factors included smoking (36%) and previous history of stroke (13%). Study limitations include patients lost to follow-up and delayed reviews due to COVID-19 pandemic. There was a lack of standardised assessment tools, inadequate documentation, and limited evaluation by clinical psychologists. These findings emphasised the importance of enhanced utilisation of a standardised cognitive assessment tool, consistent patient follow-up and systematic documentation of CI. In conclusion, dementia and MCI were less frequently diagnosed than expected one-year post-stroke. This audit provides insights into areas for improvement to optimise patient care in post-stroke dementia in Brunei.

**Session 3: Dementia risk reduction.**

**27<sup>th</sup> October 2023 4:30 – 6:00pm (Bilik Sepakat 4)**

**FBS4. WW-FINGERS: Building the evidence base for multimodal interventions for Alzheimer and dementia risk reduction through international collaborations. Francesca Mangialasche<sup>1,2</sup>.**

**<sup>1</sup> Division of Clinical Geriatrics, Centre for Alzheimer Research, Karolinska Institute.**

**<sup>2</sup> Karolinska University Hospital, Medical Unit Aging, Stockholm, Sweden.**

The successful FINGER multimodal intervention model combined five lifestyle-based components: dietary guidance, exercise, cognitive training, social activities, and cardiovascular risk monitoring. It highlighted the importance of targeting several risk factors and mechanisms simultaneously for an optimal preventive effect. The FINGER model is being tested and optimized in the World-Wide FINGERS (WW-FINGERS) network of multimodal dementia prevention trials (60+ countries). Advanced FINGER 2.0 models combine lifestyle interventions with putative disease-modifying drugs (DMD) using precision prevention approach. New long-term data will be presented from FINGER, as well as new achievements and developments in the global collaborative network.

**FBS5. AGELESS Study: An overview.**

**Maw Pin Tan.**

**Division of Geriatric Medicine, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia.**

The Transforming Cognitive Frailty into Later-Life Self-Sufficiency (AGELESS) longitudinal study of ageing is a 10-year study which subsumes three pre-existing longitudinal study of ageing studies: Towards Unusual Ageing (TUA), Malaysian Elders Longitudinal Research (MELoR) and Prevent Elder Abuse and neglect initiative (PEACE). Participants were recruited between 2013-2016 from electoral rolls and sampling frames. Baseline characteristics obtained included cognition, psychosocial, physical performance, healthcare utilisation, medical history and medications. AGELESS wave 1 (2020-2022) was completed during the pandemic, using virtual interviews followed by physical assessments. The second wave has now commenced and is expected to end in Q3 2024. Imaging, EEG, caregiver burden and socioeconomic substudies are planned and ongoing. It is hoped that the AGELESS study will provide invaluable solu-

tions towards early accurate diagnosis, resource allocation, caregiver support and reduction of the burden of dementia and related negative outcomes in our region. (<https://web.facebook.com/agelessresearchmy>).

**FBS6. AGELESS study: Risk reduction intervention for dementia.**

**Suzana Shahar.**

**Centre for Healthy Aging and Wellness, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Malaysia.**

AGELESS Trial was conducted with the aim to determine the effectiveness of a 24-month multidomain intervention on reversal of cognitive frailty (CF), to evaluate its cost and to evaluate factors influencing adherence towards our intensive intervention. Community dwelling older adults, aged 60 years old were screened for cognitive and physical impairment using Clinical Dementia Rating and FRIED criteria. A number of 957 older adults were screened and 372(38.9%) met eligibility criteria and 28.5%(n=106) agreed to participate and were randomised to either intervention (n=53) or control (n=53) group. Individuals with multimorbidity, had a higher BMI, SMI, BP(systolic) and hypercholesterolemia had a higher fat free mass and physical activity level and also a faster walking speed are more likely to participate ( $p < 0.05$  for all parameters). At baseline, the intervention group apparently had a higher BMI, MUAC and waist circumference. At 12 months, 52.8% adhered at a rate of 50% and 32.1% adhered  $\geq 75\%$  of the intervention. Adherence is the least for exercise (53%) and cognitive (53%), followed by nutrition (58%), psychosocial (60%) and vascular management (91%). Preliminary findings indicated that at 12 months, the intervention showed promising results for improvement of selected cognition, physical function, nutrient intake and brain activation. In conclusion, illness or health perception influenced interest to participate in the lifestyle medication program

and adherence is the least for extensive mode of intervention.

**FBS7. Voices of Asia: A collective narratives from the people affected by dementia calling for change and improvement. Emily Ong<sup>1,2</sup>, LiYu Tang<sup>3</sup>, Jacqueline Wong<sup>1,4-8</sup>.**

<sup>1</sup> **Dementia Alliance International.**

<sup>2</sup> **Alzheimer's Disease International.**

<sup>3</sup> **Taiwan Alzheimer's Disease Association, Taiwan.**

<sup>4</sup> **Demensia Brunei, Brunei Darussalam.**

<sup>5</sup> **CommonAge, The Commonwealth Association for the Ageing.**

<sup>6</sup> **International Institute on Ageing United Nations-Malta.**

<sup>7</sup> **Civil Society Policy Forum Working Group, World Bank Group, International Monetary Fund.**

<sup>8</sup> **Social Justice, Inclusion & Equality – Open Resilient Societies Working Group, Civil Society 7, G7 Japan.**

Over 57 million people are living with dementia globally, and 68% are living in the Asia and Pacific regions and mostly in low and middle-income countries (LMICs). Dementia is a heavily stigmatised condition in these countries due to a lack of awareness and cultural context that denies its existence and the assumption that dementia is a natural part of ageing and not a result of an underlying disease. Furthermore, the inadequate preparedness of the healthcare systems in resource-poor settings worsen the situation. Therefore, there is a need to provide a platform for those living with dementia and informal carers/care partners to have their narratives to be shared and heard by those in policy-making, healthcare, social services and society as a whole. The eBook project aimed to provide a safe and collective strength to step up and advocate for change in attitudes towards dementia; raise dementia awareness to lift the silence, reduce stigma and discrimi-

nation; create a sense of comfort in talking about dementia; and work together to tackle this global health issue.

**Session 5: Environmental Design Special Interest Group.**

**29<sup>th</sup> October 2023 11:00 – 12:30pm (Bilik Sepakat 4)**

**FBS8. More meaningful experiences and participation for people living with dementia and older people through enabling design.**

**Emily Ong<sup>1,2</sup>, Jacki Liddle<sup>1,3</sup>, LiYu Tang<sup>4</sup>, HE Yanty<sup>5</sup>, Jacqueline Wong<sup>1,6-11</sup>, Jeremy Lim<sup>12</sup>.**

<sup>1</sup> **Environmental Design Special Interest Group, Dementia Alliance International.**

<sup>2</sup> **Alzheimer's Disease International.**

<sup>3</sup> **School of Health and Rehabilitation Sciences, The University of Queensland and Occupational Therapy Department Princess Alexandra Hospital, Brisbane, Australia.**

<sup>4</sup> **Taiwan Alzheimer's Disease Association, Taiwan.**

<sup>5</sup> **ASEAN Inter-Parliamentary Assembly (AIPA), Brunei.**

<sup>6</sup> **Demensia Brunei, Brunei Darussalam.**

<sup>7</sup> **CommonAge, The Commonwealth Association for the Ageing.**

<sup>8</sup> **International Institute on Ageing United Nations-Malta.**

<sup>9</sup> **Dementia Alliance International.**

<sup>10</sup> **Civil Society Policy Forum Working Group, World Bank Group, International Monetary Fund.**

<sup>11</sup> **Social Justice, Inclusion & Equality – Open Resilient Societies Working Group, Civil Society 7, G7 Japan.**

<sup>12</sup> **Quantum Leap Incorporation, Singapore.**

The ways in which communities, technologies and buildings are designed can make older people and people living with dementia feel

disabled and isolated. Designs that are enabling can support the participation and quality of life of people living with dementia and ensure their continued contributions to communities, bringing benefits to all, and creating a truly inclusive, friendly community. The approaches to achieving enabling design require cross-disciplinary collaborations which centre the voices and perspectives of people living with dementia and their care partners.

This symposium will discuss key questions related to environmental design, challenges faced by people living with dementia, and creative and practical innovations from a multidisciplinary perspective. The panellist represents a range of expertise: lived experience, care partner experience, occupational therapy, health professional, policy maker, architecture and assistive technology.

## **ORAL PRESENTATIONS**

### **Session 1: Psychosocial interventions.**

**28<sup>th</sup> October 2023 11:00 – 12:30pm**  
**(Dewan Musyawarah)**

#### **OP1. Finding meaning in the moment: a workshop on applying mindfulness when affected by dementia.**

**Eva van der Ploeg<sup>1,2</sup>.**

<sup>1</sup> **Soulful Brain, Bali, Indonesia.**

<sup>2</sup> **Leiden University Medical Centre, Leiden, Netherlands.**

Following on the plenary talk about mindfulness for family members of people living with dementia, we dive a bit deeper into applying mindfulness. After a short recap of what mindfulness is. Four mindful attitudes are presented and you are asked to apply these to your interactions with a person with dementia, either as a family member or a professional. This workshop is also suitable for people who live with them: you will be able to apply mindful attitudes to your daily life. Workshop attendees are asked to think about a situation, where they wish they could be

more mindful (or calm if you like) and to start thinking about how the attitudes can be applied in that specific situation.

#### **OP2. Art & dementia: Big Ones Little Ones.**

**Trish Amichi.**

**BIG ONES LITTLE ONES Inc, International Children's Visual Art & Literacy Program, University of New South Wales, Sydney, Australia.**

Today begins with an overview of the Australian-based visual arts/literacy program - BIG ONES LITTLE ONES Inc. (or BOLO). Examples of intergenerational interactions (within the BOLO context) are provided, and references made to the cultural significance of strong intergenerational links. Noting intergenerational programs recently piloted in Australia concludes this presentation.

BIG ONES LITTLE ONES encourages children's imagination, creativity and literacy skills, helps build self-esteem and pride in achievement, and increases understanding of a common humanity, thereby promoting social harmony and justice. This is achieved by engaging children (Little Ones) in art and storytelling activities ("interesting, engaging, challenging and fun"), through which they become the storytellers of their own lives. Giving children a voice and providing an audience for those voices allows young ones to shine - irrespective of who they are, where they come from, or what their level of education or ability might be. Sharing stories (told in pictures and words) helps showcase cultures, communities and countries to audiences who are encouraged to listen to and take notice of the voices of today's Little Ones: future citizens and leaders of our world tomorrow.

Importantly, the BOLO initiative provides for intergenerational interaction. To date (2022) 122 Australian Aboriginal and Torres Strait Islander artists have supported BOLO. By exhibiting their paintings alongside

those of the Little Ones, these Big Ones provide encouragement, inspiration, motivation and role models for the children. They also pass on information and skills to the next generation: interactions that are culturally invaluable.

*Images and stories shared in this presentation are the work of BOLO participants.*

I thank the Conference committee and organisers for inviting me to participate in the program. Special thanks to Datin Jacqueline Wong for her unwavering commitment to making the world a better place for all.

**OP3. Music and dementia.  
Heerraa Ravindran.  
Ascendance.**

What is the power of music in our daily lives, and how does it influence who we are?

An international singer-songwriter and an undergraduate at Harvard, Heerraa will be sharing her insights on how music plays an important role for a healthy mind. Over the spring, Heerraa took a "Music & The Mind" class at Harvard where she learned in depth how music affects different sections of the brain and how it can be used to improve mental health, aid and support the wellbeing of dementia patients, and more.

With her mission of changing the world with music, she utilises music to positively impact the world through meaningful lyrics within catchy melodies. All her songs incorporate life lessons from managing ego, staying hopeful in challenging situations, finding happiness from within and more.

Discover how important music is, especially in your developing years and as you grow older.

**Session 2. Dementia diagnosis, treatment, care and support:  
28<sup>th</sup> October 2023 11:00 – 12:30pm**

**(Bilik Sepakat 3)**

**OP4. Diagnosis and biomarkers: Person-Centred Approaches in the Cognitive Assessment Process.**

**Donald Yeo.**

**KALL Psychology Clinic, Singapore.**

The practice of clinical neuropsychology contributes greatly to the diagnosis of dementia. Neuropsychological profiling allows us to determine a pattern of cognitive strengths and weaknesses, that may indicate the possible underlying neuropathology. Neuropsychological assessments are designed to identify the extent and severity of a patient's cognitive and behavioural impairment, which indirectly yields information about the structural and functional integrity of a patient's brain. This process however can be challenging and confronting for patients and their family as they struggle in coming to terms with the changes associated with dementia. This presentation provides personal insights and perspectives from practice wisdom, in learning to be more supportive and caring during this evaluation process, in order to increase individual motivation and sustain meaningful engagement, while ensuring good rapport, respect and dignity in a person-centred way.

**OP5. Ageing brain vs dementia - Radiological assessment and biomarkers.**

**Sunithi Elizabeth.**

**Department of Diagnostic Imaging, Jerudong Park Medical Centre, Brunei Darussalam.**

In this talk, we will cover an approach to quantify brain volume and cortical, subcortical causes of dementia and specifically about how to report imaging in patients with dementia. The talk will also cover advances in MRI and AI in Radiological Imaging in ageing and dementia and possible research areas.

**OP6. Surgical causes of cognitive impairment.**

**Dawn Antony.**

**Department of Neurosurgery, Brunei Neuroscience, Stroke and Rehabilitation Centre, Brunei Darussalam.**

Major Neurocognitive Disorders (Dementia) have sometimes been approached with therapeutic nihilism in the past, as the majority of these disorders are relentlessly progressive and ultimately fatal. The prevalence of Major Neurocognitive Disorders is expected to continue to increase along with the increasing numbers of the ageing population. Currently, 47 million people in the world have dementia, and the number is expected to increase to 131 million by 2050. In the literature, the reported frequency of Major Neurocognitive Disorders due to potentially reversible conditions varies from 1 to 23 %. Surgically treatable ones form a small subset of these. Early diagnostic evaluation of patients with Major Neurocognitive Disorders is essential to identify patients who may have treatable conditions. Here we try to elaborate on the imaging and diagnostic tests done to identify surgically treatable causes that we have come across with emphasis on an algorithm to be followed to select patients with Normal Pressure Hydrocephalus, who may benefit from a CSF diversion procedure.

**OP7. Nuclear imaging modalities for dementia.**

**Hamid Naseer.**

**Department of Nuclear Medicine, Pantai Jerudong Specialist Centre, Brunei Darussalam.**

The presentation will discuss the use of Nuclear Medicine imaging techniques in neurodegenerative disorders, especially dementia. Use of F-18 FDG and other PET and SPECT tracers will be highlighted for identification of various biomarkers of dementia like hypome-

tabolism, amyloid deposition, Tau protein detection and dopaminergic abnormalities. This presentation will give clinicians insight into early detection of dementia using nuclear functional imaging techniques well before the appearance of radiological structural degenerative changes in brain.

**Session 3. Dementia awareness and friendliness I.**

**28<sup>th</sup> October 2023 11:00 – 12:30pm (Bilik Sepakat 4)**

**OP8. An intergenerational dementia education program in Indonesia: A cross-sectional study.**

**Yulisna Mutia Sari<sup>1,2</sup>, Tri Amelia Rahmitha Helmi<sup>1,3</sup>, Muhana Fawwazy Ilyas<sup>1,4,5</sup>, Michael Dirk Roelof Maitimoe<sup>1</sup>, Imelda Theresia<sup>1</sup>, Erna Kostina<sup>1</sup>, Ken Lestariyani Sulis<sup>1</sup>.**

<sup>1</sup> **Alzheimer's Indonesia, Jakarta, Indonesia.**

<sup>2</sup> **Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, Monash University, Melbourne, Australia.**

<sup>3</sup> **Health Security Partners.**

<sup>4</sup> **Department of Neurology, Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Indonesia.**

<sup>5</sup> **Department of Anatomy and Embryology, Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Indonesia.**

**Background:** With an increase in the number of people with dementia worldwide, it is essential that the community have adequate dementia knowledge. Educational programs have been considered as a useful intervention to improve knowledge about dementia. However, one segment of the population that may particularly be receptive to information about dementia and can strengthen intergenerational relationships with family or other older people in their community, yet are limited to be studied, are teenagers. This study reports



the evaluation of an intergenerational dementia education program and the program effects on dementia knowledge and perspective.

**Methods:** Dementia education program was delivered to teenagers by Alzheimer's Indonesia (ALZI) committee members and health practitioners. This was a cross-sectional study in which participants were surveyed after the program completion. Descriptive statistics were generated for all demographic data and frequencies with percentages were used for categorical variables. Qualitative data from the questionnaire items on perceived new knowledge and perspective about dementia were analysed using thematic content analysis.

**Results:** The program involves 135 teenagers with mean (SD) age of 22.7 (1.6) and 71.3% were female. Almost all (98.5%) of participants agreed that the program was satisfying and 99% agreed that this program had been useful. Nine themes emerged regarding perceived new knowledge on dementia and most of the participants (109 [80.7%]) reported that they gained more knowledge on various types of dementia. For perspective about dementia, 8 themes emerged, and 49 (36.2 %) participants mentioned that they have a better perspective towards individuals with dementia.

**Conclusions:** These findings provide first evidence that intergenerational dementia education programs improve knowledge and perspective about dementia. Findings from the program evaluation have enabled the project team to reflect on their design and operation of the intergenerational education program on dementia and provided valuable insight for future development and further study.

**OP9. Advocacy, education and cooperation: The experience and prospect of building dementia-friendly communities in Macao.**

**Jianwei Wu<sup>1,2</sup>, Wai In Lei<sup>1,2</sup>, Iat Kio**

**Van<sup>1,2</sup>, Ion Hong Wong<sup>1,2</sup>.**

**<sup>1</sup> Kiang Wu Nursing College of Macau.**

**<sup>2</sup> Macau Alzheimer's Disease Association.**

The prevalence of dementia worldwide is increasing rapidly and dementia was proposed to be a public health priority. In response to the increasing dementia population, the government of Macao Special Administrative Region (SAR) launched a dementia policy in 2016, including a 10-year strategic framework to establish Dementia-Friendly Communities (DFCs) in Macao. Macau Alzheimer's Disease Association (MADA), Kiang Wu Nursing College of Macau (KWNC) and other participants have been making efforts to achieve the goal in the past years. This article summarised the experience and prospect of building Dementia-Friendly Communities in Macao.

Advocacy targets governments to make dementia a public health priority. Earlier in this century, professors from KWNC began to unite with other health professionals to pay attention to dementia issues and established MADA in 2010, which became a full member of ADI in 2013. MADA together with other NGOs made great efforts to advocate for the government to make dementia a public health priority. Additionally, KWNC initiated a systematic educational programme issued public education on dementia to tackle the ageing population in 2011. Six categories of people were listed as key targets for raising awareness of dementia. The programme has engaged nearly 100 seminars and training workshops, benefiting more than 10,000 participants. A study in 2019 showed that Macao residents have reasonably good knowledge of dementia. KWNC and MADA try their best to develop mutually beneficial working partnerships and relationships with community associations and international society. In total, 163 NGOs actually pledged to become dementia friendly organisations initiated by MADA and the government in the dementia friendly community project in 2017, 2018 and 2019.

KWNC and MADA with other NGOs will continue advocating for the development of Macau Dementia Policy, especially in the top-down design, budget allocation and cooperation between government and local NGOs. Meanwhile, KWNC will continue to focus on public education and cultivation of health professionals by facilitating and encouraging a combination of education, research and social practice.

**OP10. Identifying mental health risk factors and its association with psychological frailty among community-dwelling older adults: A pilot study.**

**Ahmad Zahid Md Daud<sup>1</sup>, Ponnusamy Subramaniam<sup>2</sup>, Nurul Fatin Malik Rivan<sup>2</sup>, Ahmed A Moustafa<sup>3</sup>, Shyh Poh Teo<sup>4,5</sup>.**

<sup>1</sup>**Clinical Psychology and Behavioural Health Program, National University of Malaysia.**

<sup>2</sup>**Centre for Health Ageing & Wellness (HCARE), National University of Malaysia.**

<sup>3</sup>**School of Psychology, Faculty of Society and Design, Bond University, Gold Coast, Queensland, Australia.**

<sup>4</sup>**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

<sup>5</sup>**PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** Psychological frailty, like physical and cognitive frailty, develops from ageing-related losses in physiological and psychological reserves and contributes to greater vulnerability to stress and higher morbidity risks. According to the diathesis-stress concept, the emergence of a mental illness requires both the presence of a pre-existing susceptibility and the occurrence of stressful events (important life events, stress). This pilot study was conducted to identify mental health risk factors and its association between psychological frailty and mental health

outcomes in Malaysia community dwelling older adults.

**Methods:** A purposive sampling technique was used to select 25 participants aged 60 and above from different communities. Measures of psychological frailty, mental health risk factors (gender, age, education, chronic diseases, social isolation, cognitive impairment), and mental health outcomes (including depressive symptoms and psychological well-being) were assessed using standardised instruments.

**Results:** The preliminary findings of the study suggest a significant association between psychological frailty and mental health outcomes.

**Conclusion:** Despite the limited sample size, the pilot study offers initial insights into the interplay between psychological frailty and mental health outcomes in older adults dwelling in Malaysian communities. However, these findings need to be interpreted with caution given the limited generalisability due to the small sample size. This pilot study underlines the necessity for larger, more comprehensive research to confirm these preliminary findings in understanding the relationship of psychological frailty and mental health outcomes.

**OP11. Dementia knowledge of family caregivers in Indonesia.**

**Sharon Andrews<sup>1</sup>, Sri Mulyani<sup>2</sup>, Azam David Saifullah<sup>2</sup>, Michael Dirk<sup>3</sup>, Tara Sani<sup>4</sup>, Nelson Sudiyono<sup>4</sup>, Thi Thuy Ha Dinh<sup>1</sup>, DY Suharya<sup>5</sup>, Christantie Effendy<sup>2</sup>, Kusri S. Kadar<sup>6</sup>, Yuda Turana<sup>4</sup>.**

<sup>1</sup>**School of Nursing, College of Health and Medicine, University of Tasmania.**

<sup>2</sup>**Department of Mental Health and Community Nursing, Universitas Gadjah Mada (UGM), Yogyakarta.**

<sup>3</sup>**Alzheimer's Indonesia.**

<sup>4</sup>**Department of Neurology, School of Medicine, Atma Jaya Catholic University of Indonesia (UAJ), Jakarta.**

<sup>5</sup>**Alzheimer's Disease International**

**(ADI), Jakarta.**

**<sup>6</sup>Universitas Hasanuddin (UNHAS), South Sulawesi.**

**Background:** Indonesia has the fourth largest population in the world. In line with global ageing, Indonesia is experiencing significant increases in the number of older people and as a result, the number of people living with dementia is also rising. Individuals with dementia experience decline in physical and cognitive abilities over time. Caregivers (either formal or informal) are an essential source of support for people living with dementia. In Indonesia, as in other Asian countries, family caregivers are responsible for the majority of care and support for a person with dementia. An understanding of caregivers' knowledge about dementia can inform support and educational interventions. Despite the expected growth in the prevalence of dementia in Indonesia, little is known about family caregivers' knowledge of dementia. The aim of this project was to explore family caregivers' understandings about dementia using a translated dementia knowledge tool.

**Methods:** This study used a cross sectional survey design. Two hundred family caregivers across 10 Indonesian provinces were sent an invitation via Alzheimer's Indonesia to participate in a survey. A translated version of the Dementia Knowledge Assessment Scale (DKAS-I) was used.

**Results:** In total, 76 family caregivers provided complete survey responses (38% response rate). Family caregivers answered over two-thirds of the items correctly (mean correct score of 33/50). Variables found to be significantly correlated with higher dementia knowledge in our sample were age, relationship to the person with dementia (being a child) and exposure to dementia education.

**Conclusions:** Family caregivers of people living with dementia, who had access to Alzheimer's Indonesia support groups demonstrated moderate dementia knowledge, as

measured by the DKAS-I. Additional educational intervention is needed to address deficits in knowledge about communication, changed behaviours and quality care practices. Future research is needed to investigate the dementia knowledge of more diverse groups of Indonesian family caregivers.

#### **OP12. Tackling ageism in the Caribbean.**

**Rianna Patterson.**

**Dementia: The Island Journey, Dominica Dementia Foundation.**

**Background:** Highlighting ageing and living well in a cultural context. Creating a realistic and positive approach to older people in the media. Exploring holistic treatments for dementia and engaging in traditional dances in a quest to understand the recipe for the meaning of quality of life.

**Methods:** A qualitative study which comprised 7 respondents who are adults. This study was conducted using questionnaires. Data was collected through an interview/documentary approach.

**Results:** Main messages were (1) dementia is not a normal part of ageing, as young onset dementia is apparent in Caribbean communities and (2) there is more to the person than their dementia, this includes goals and aspirations.

**Conclusion:** We have shown that it is possible to disseminate information effectively about dementia in the Caribbean.

#### **OP13. Addressing the lack of correct dementia diagnosis in India: Bridging East and West.**

**Narendhar Ramasamy.**

**Alzheimer's and Related Disorders Society of India, India.**

In 2023, there were 8.8 million people with dementia in India. There are challenges in the diagnosis and treatment of dementia due to cultural, socioeconomic, and healthcare system differences between the East and the

West. Correct diagnosis has been low, close to 10% of estimated numbers. Dementia diagnosis is impeded by poor awareness, stigma and cultural beliefs, communication barriers and lack of diagnostic facilities. Dementia treatment is challenging due to limited access to healthcare, affordability of medications and social coverage and reliance on traditional medicine and alternative therapies.

Efforts to improve diagnosis and treatment include:

- Awareness talks, campaigns, dementia friendly initiatives
- Training Healthcare Professionals: ARDSI customised Dementia care skills training course with Indianized modules, created a band of master trainers and a workforce of care trainees for essential dementia care
- Cognitive diagnostics – ACE III, CDR, NPI, MoCA. (Mini Mental State Examination is restricted due to copyright issues).
- Expanding healthcare infrastructure towards model services. ARDSI advocated the local government to run model care services, serving as a knowledge partner providing standard operating procedures for day care and full-time dementia care. The Kerala State Initiative on Dementia includes Day care for milder cases and a Full time Dementia Care Centre. These best practices should be consolidated, upscaled and mainstreamed nationwide.
- ARDSI advocates for affordable diagnostics, medications and support services.

Standards for dementia diagnosis and treatment in India following international quality standards include:

- Dementia diagnostic criteria using the DSM-5 Diagnostic and Statistical Manual of Mental Disorders standards
- The National Institute of Mental Health and Neurosciences (NIMHANS) follows international criteria for diagnosing Alzheimer's disease, using clinical, imaging, and biomarker evidence to support the

diagnosis

In conclusion, the diagnosis and treatment of dementia in India faces unique challenges, where the East meets the West in low resource settings without compromising service quality.

#### **Session 4: Dementia research and innovation I.**

**28<sup>th</sup> October 2023 2:30 – 4:00pm (Bilik Sepakat 3)**

#### **OP14. Davos Alzheimer's Collaborative healthcare system preparedness programme (DAC-SP).**

**Shyh Poh Teo<sup>1,2</sup>.**

**<sup>1</sup> Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**<sup>2</sup> PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

In 2014, the Dementia Discovery Fund was launched, a venture capital fund with public and private sources for the discovery and development of Alzheimer's disease therapeutics. A similar fund, the Diagnostics Accelerator, was created to develop innovative diagnostics and biomarkers. However, improvements in Alzheimer's disease diagnostics and therapeutics requires a translation from research to clinical practice. The Davos Alzheimer's Collaborative healthcare system preparedness programme (DAC-SP) was launched in 2021 to support healthcare system operational changes to achieve this. The mission of DAC-SP is to facilitate the implementation of national, regional and global commitments to provide access to future innovations in treatment, diagnosis and care. A funding mechanism was developed to encourage and support multiple diverse projects aimed at common operational challenges to integrate innovative locally-driven solutions through flagship site pilots and a grant pro-

gramme. Representatives of health systems across a range of different settings and resources were brought together to engage and learn from these projects in communities of practice and learning labs. DAC-SP engaged seven health systems across six countries to implement the early detection flagship programme: Brazil, Jamaica, Japan, Mexico, Scotland and the United States (2 locations). From the launch of a grant call for proposals, 76 responses from 21 countries in two months were received. After the proposals were reviewed by an independent committee, awardees were selected to seed fund transformation and generate evidence. It was expected that the local health systems would continue implementing changes in a sustainable manner after the pilot projects were completed. The grant awardees were Armenia, Brunei, Canada, Germany, Japan, Kenya and the United States, while Cuba was a non-funded DAC-SP collaborator. Selected programmes are briefly described and several learning points from the communities of practice and learning labs are shared in this presentation.

**OP15. Dementia care in the age of 4IR: Challenges and opportunities.**

**Khadizah Mumin.**

**Centre for Advanced Research, Universiti Brunei Darussalam.**

Dementia, a pervasive and debilitating neurodegenerative condition, presents a significant societal challenge in the era of the Fourth Industrial Revolution (4IR). In this session, the opportunities and challenges that emerge as 4IR technologies intersect with dementia care are explored. Advancements in technologies such as artificial intelligence, telemedicine, wearable devices, and data analytics offer promising avenues for early diagnosis, personalised treatment, and improved quality of life for individuals with dementia. However, these opportunities are juxtaposed with concerns related to data privacy, ethical dilem-

mas, and the digital divide. This session provides an overview of the evolving landscape where the intersection of 4IR and dementia care necessitates a balanced consideration of benefits and limitations.

**OP16. A meta-synthesis and critical review on sexuality in people with dementia using the model of human occupation.**

**Dinnee Kong<sup>1</sup>, Muhammad Hibatullah Romli<sup>2</sup>, Navin Kumar Devaraj<sup>3</sup>, Hakimah, Salehuddin<sup>4</sup>, Maw Pin Tan<sup>5</sup>.**

<sup>1</sup> **Genting Dementia Care Centre, Segambut, Kuala Lumpur, Malaysia. Malaysian Research Institute on Ageing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.**

<sup>2</sup> **Department of Rehabilitation Medicine & Malaysian Research Institute on Ageing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.**

<sup>3</sup> **Department of Family Medicine & Malaysian Research Institute on Ageing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.**

<sup>4</sup> **Department of Medicine & Malaysian Research Institute on Ageing, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia.**

<sup>5</sup> **Ageing and Age-Associated Disorders Research Group, Department of Medicine, Faculty of Medicine, Universiti Malaya, 50603 Kuala Lumpur. Department of Medical Sciences, School of Medical and Life Sciences, Sunway University, Bandar Sunway, Selangor.**

**Objectives:** To identify gaps in the study of sexuality in dementia using the Model of Human Occupation and to develop a practice framework on sexuality in dementia

**Design:** A meta-synthesis mapping review.

**Setting:** Electronic searches utilising six databases and cross-referencing of existing published review articles were conducted. Participants: Persons living with dementia, care partners, and healthcare workers.

**Measurements:** Quality assessment employed the Hawker's Evidence Appraisal Tool while synthesis and mapping were conducted against the Model of Human Occupation (MOHO).

**Results:** From 1439 articles identified, 27 articles were included in the final analysis. Available studies primarily explored sexuality from the viewpoint of spouses of persons living with dementia with fewer articles considering healthcare workers, other family members, persons living with dementia and the general public. The volition domain of MOHO was the most explored. Habituation, performance skill and environment domains were also considered with more attention on perceived challenges than practical coping. The psychological perspective was most heavily investigated compared to other areas of practice such as rehabilitation. Most coping strategies were developed informally through experience. The external focus, such as the role of space in the environment, was the least explored.

**Conclusions:** The exploration of sexuality in dementia has circulated within the hidden narrative. The topic of sexuality remains sensitive and hence limiting the availability of evidence-based interventions in this area.

**OP17. Gaps in informal care networks among older adult Brunei-Malays: Implications for older adults with dementia.**

**Kartini Rahman.**

**Centre for Strategic and Policy Studies, Brunei Darussalam.**

The findings are from repeated interviews, and participant observation conducted over a period of six (6) months in 2018 in 14 households in Kampong Ayer, Brunei Darussalam. The findings illustrate how gaps in informal

care networks can occur. Although the findings represent the unique experience of families in Kampong Ayer at a given time, the themes illustrated are points for a wider discussion.

The findings show that informal care networks are not rigid, they are pliable. Relationships need to be reinforced throughout the life course through continued contact and the cultivation of bonds. Relationships can thus be lost over time; this is shown in older adults who have a large number of adult children but only rely on one or two adult children for ADL (activities of daily living) support. Older adults would confess to meeting the majority of their adult children only during familial gatherings, such as weddings or Hari Raya Aidilfitri. This is despite the extensive ADL support needed. Thus, the number of adult children is not a good predictor of support. A significant theme amongst adult children is that they do not have time to provide care to older parents because they are preoccupied with caring for their own children.

My data shows that gaps in support were mitigated. For some older adults, the majority of ADL support was met through their spouses and/or, if they had finances, through a domestic helper. Larger kinship networks put older adults at an advantage, especially for those who have absent family members or are childless. The importance of wider networks is evidenced in the significance of support from older adult siblings in my findings.

The implications for older adults with dementia are that they are less able to mitigate gaps in support and/or cultivate or reinforce bonds in their network. Both are important facets of attaining ADL support. Informal carers would also be strained when other family members did not assist in caregiving.

**OP18. ECT-AD Study: A randomised controlled trial of electroconvulsive therapy plus usual care versus simulated-ECT**

**plus usual care for the acute management of severe agitation in dementia.**

**Maria I. Lapid<sup>1</sup>, Brent P. Forester<sup>2</sup>, Adriana P. Hermida<sup>3</sup>, Louis Nykamp<sup>4</sup>, Martina Mueller<sup>5</sup>, Simon Kung<sup>1</sup>, Georgios Petrides<sup>6</sup>.**

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<sup>5</sup> **Medical University of South Carolina, Charleston, South Carolina, United States of America.**

<sup>6</sup> **Zucker School of Medicine at Hofstra/Northwell, Glen Oaks, New York, United States of America.**

**Background:** Over 90% of individuals with Alzheimer's disease (AD) experience agitation, however there are no FDA-approved treatments for severe agitation in advanced dementia. Off-label psychotropics have limited efficacy and safety, and behavioural interventions are ineffective for severe agitation. There is preliminary evidence that electroconvulsive therapy (ECT) is safe and effective in reducing severe uncontrolled agitation in individuals with advanced dementia. In this presentation we describe the ECT-AD study rationale, methodology, and evolution of study design.

**Methods:** The ECT-AD study is a US multi-site NIH-funded randomised controlled trial to determine the efficacy and safety of ECT for severe and treatment refractory agitation and aggression in advanced dementia, and examine the durability of the acute treatment effect in an exploratory naturalistic design. Inclusion criteria include dementia diagnosis, ages 55-89, MMSE  $\leq 15$ , Cohen-Mansfield Agi-

tation Inventory (CMAI) score  $\geq 5$  on at least one item of physical aggression, and at least three failed pharmacological interventions. Consent is obtained from a legally authorised representative. Participants are randomised 1:1 to ECT plus usual care (UC) or simulated ECT (S-ECT) plus UC up to 9 sessions 3 times per week. For efficacy, primary outcome measure is CMAI, and secondary are the Neuropsychiatric Inventory – Clinician Version, Alzheimer's Disease Cooperative Study-Clinical Global Impression of Change Scale, and Pittsburgh Agitation Scale. Safety and tolerability are assessed with Severe Impairment Battery 8-item for cognitive decline, the Confusion Assessment Method for development of delirium, and adverse event monitoring.

**Results:** The study is open to enrolment. Changes in study design from randomised to open-label were required to enhance recruitment.

**Conclusion:** This innovative study will fill a gap in the current clinical practice of treating severe agitation in advanced dementia using a well-studied, established, and safe treatment. Study findings may demonstrate support for a new therapeutic use of ECT for severe agitation in dementia.

**OP19. The relationship between beat-to-beat BPV and cognitive change over a six-year follow-up among community dwellers.**

**Nur Fazidah Asmuje<sup>1,2</sup>, Sumaiyah Mat<sup>3</sup>, Phyo Kyaw Myint<sup>4,5</sup>, Maw Pin Tan<sup>2,6,7</sup>.**

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<sup>4</sup> **Ageing Clinical & Experimental Re-**

**search (ACER) Team, Institute of Applied Health Sciences, University of Aberdeen, Aberdeen, UK.**

**<sup>5</sup> Department of Medicine for the Elderly, NHS Grampian, Aberdeen Royal Infirmary, Aberdeen, UK.**

**<sup>6</sup> Centre for Innovations in Medical Engineering, University of Malaya, Kuala Lumpur, Malaysia.**

**<sup>7</sup> Department of Medical Sciences, Faculty of Healthcare and Medical Sciences, Sunway University, Bandar Sunway, Malaysia.**

**Background:** While hypertension is a risk factor for cognitive decline, it is currently diagnosed with single clinic blood pressure (BP) measurements. Indeed, BP varies with each heartbeat, though the relationship between blood pressure variability (BPV) with cognitive decline is less well established. Therefore, this study aims to evaluate the relationship between beat-to-beat BPV at baseline and cognitive change over a six-year period.

**Method:** The study utilised the first and fourth wave data from Malaysian Elders Longitudinal Research (MELoR) study, which included community dwellers aged 55 years and over at recruitment. Non-invasive continuous BP was recorded at baseline using vascular unloading method at baseline (Taskforce™, CNSystems). Diastolic BPV (DBPV) was determined with standard deviation (SD), coefficient of variation (CV) and average real variability (ARV), and participants were dichotomized into lower and higher DBPV groups using median cut-offs. Change scores were calculated by subtracting six-year follow-up scores from baseline scores overall and individual domains using the Montreal Cognitive Assessment (MoCA) test.

**Results:** Data for 492 participants, mean (SD) age = 67.8 (6.8) years, were included. Higher SD-DBPV was associated with lower changes in MoCA scores (mean difference, MD (95%) = -0.60 (-1.11, -0.10)) as was

ARV-DBPV (MD (95%) = -0.63 (-1.11, -0.14)) after adjustment for potential co-founders. Lower ARV-DBPV was also associated with lower changes in delayed recall (MD (95%) = -0.42 (-0.70, -0.13)) after adjustment for potential co-founders.

**Conclusion:** Higher beat-to-beat DBPV at baseline was associated with less deterioration in cognitive scores especially in the delayed recall domain over a six-year follow-up period. Higher BPV may protect against cognitive decline through neuroplasticity and brain resilience. Future studies should consider combining cognitive assessment with other pathological evidence such as brain imaging which may help identify the mechanisms underpinning this relationship.

**Session 5.Support for dementia carers I. 28<sup>th</sup> October 2023 2:30 – 4:00pm (Bilik Sepakat 4)**

**OP20. "Becoming a resourceful carer" - An in-house dementia care training programme developed for care staff in dementia day care settings in NTUC Health, Senior Day Care, Singapore.**

**Cindy Koe, Pei Lin Yik, Yen Chun Kuo. NTUC Health Co-operative Ltd.**

**Background:** Caring for the elderly with dementia can be challenging and requires specialised knowledge and skillset. Thus, care staff at our day centres need to be well-equipped to support our seniors. Our curriculum caters to the learning needs of our care staff, many of whom have lower literacy levels, limited healthcare backgrounds, and are Mandarin speakers. Training content and delivery are contextualised for practical application to improve staff's understanding, skills, and confidence.

**Methods:** Training needs were gathered and analysed by experienced dementia practitioners through staff feedback, identifying service and previous training gaps. Aligned with the



Dementia Care Competency Framework (DCCF) by the Agency for Integrated Care (AIC) in Singapore, a series of training modules were developed. Training is conducted by dementia practitioners with occupational therapy and nursing backgrounds. Training contents were delivered in layman's language with the use of videos, relevant case scenarios from centres, and group discussions to facilitate learning. The training was conducted in Mandarin and English respectively.

**Results:** Ten runs of training sessions were conducted from January 2021 to March 2022 with 114 participants across 22 NTUC Health Day Centres for Seniors. Pre- and post-surveys were administered for 2 English and 2 Mandarin runs conducted in September 2021 and March 2022. A total of 30 completed pre- and post-survey were analysed (n=30). Results showed a statistically significant improvement of 15.7% ( $p < .05$ , n=30) in mean scores on their understanding of dementia (Means of 8.67 and 10.0 for pre & post-survey questions respectively). Fifty percent (n=15) of the staff showed at least 2 points increase in their post-survey score.

**Conclusion:** This study shows that our customised training illustrated an improvement in care staff dementia knowledge. The use of on-job training and competency checklist after training can be adopted for better practical application to the care setting.

#### **OP21. Placement of the Regional Facilitators of Dementia Policies and their Participations in E-learning courses.**

**Yumi Shindo, Kentaro Horibe, Shinichiro Maeshima.**

**National Center for Geriatrics and Gerontology, Japan.**

With the highest ageing rate in the world, municipalities in Japan have been placing Regional Facilitators of Dementia Policies (RFDP) in order to implement and promote various dementia policies in the communities. RFDP holds national certifications such as social

workers and public health nurses, and is engaged in activities such as 1) building and expanding the network among medical and long-term care professionals, 2) planning and coordinating activities and initiatives to support persons with dementia. In January 2022, National Center for Geriatrics and Gerontology developed e-learning courses for RFDP working in A prefecture to provide learning opportunities such as good practices and community networking. To understand and analyse the needs of RFDP, the viewing histories of these courses were examined.

In March 2023, the e-learning course had 45 contents, with 7 mandatory contents and 38 optional contents. In compiling the data, all personal information was removed and only the browsing histories at the end of March were utilised for analysis.

The number of RFDP in A prefecture was 385, and 15.6% of them completed the mandatory courses. 64.4% finished four or more contents while 18.2% did not take any. As for the optional courses, 6.5% took more than 11 courses while 60.8% did not take any. The size of the municipality and the number of RFDP placed in the same municipality did not affect the browsing histories.

The result was divided between those who had taken many courses and those who had not taken any. While many RFDPs reported the courses were interesting, they faced difficulties in finding time to engage with the materials. Additionally, RFDPs expressed a desire to apply the acquired knowledge to their activities, but confirmation of its implementation is pending. Further investigation is necessary to ascertain this aspect for the future.

#### **OP22. Preparation to implement the Indonesian version of the WHO iSupport module for people with dementia carers.**

**Nicholas Hardi, Kevin Kristian, Mikhael Aditya, Natalia, Yuda Turana, Yvonne Suzy Handajani.**

**School of Medicine and Health Sciences,**

**Atma Jaya Catholic University of Indonesia.**

**Background:** As caregiving is essential in the life of people living with dementia (PwD), ensuring the carers' quality of life is imperative. The iSupport, a module developed by WHO, is an educational module designed to help PwD carers and has been adapted to fit into Indonesian culture. However, its applicability in Indonesia remained unknown. Hence, this study reported the initial process of preparing the Indonesian version of the iSupport training materials and described the characteristics of the prospective carer for pilot training.

**Methods:** Preparation of the training material was conducted to determine the topics of each session and their technical execution. Training of the prospective participants involved residents from 2 Jakarta sub-districts, which were selected through a questionnaire. It consisted of questions about participants' characteristics, the amount of time actively cared for PwD, and their stress level, measured by the Perceived Stress Scale (PSS). Data were analysed descriptively.

**Results:** The prior expert meeting concluded that the training could be divided into seven sessions and delivered offline and online. Each session included a pre- and post-test, lecture, discussion, relaxation, and self-reflection. The duration between sessions was two weeks. All carers (n=7) were women and had at least 12 years of education. The median stress level was 14 (Q1:12-Q3: 15.75). Most of them were adults (71.4%), married (57.1%), not working (85.7%), relatives of the PwD (42.9%), and earned under 1 million rupiahs monthly (85.7%).

**Conclusion:** The carers found were part of the family members of people with dementia and came from groups with low resources. Some materials were considered challenging to comprehend, highlighting the importance of direct explanation from the expert to the trainees. Various efforts were considered to

enhance the learning experience, such as showing videos, adding relaxation music, and joint ice-breaking activities.

**OP23. Perspectives on the feasibility of the dementia iSupport manual in Brunei Darussalam.**

**Kahterine Lee Yen Chua<sup>1</sup>, Asmah Husaini<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

<sup>1</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam.**

<sup>2</sup> **Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

The global and national epidemiologic growth of dementia raises the need for support for dementia caregivers. Dementia represents a debilitating condition involving impaired cognitive function that impacts one's perceptive abilities, memory, and mannerisms which considerably affects their capabilities of fulfilling daily needs and activities. In Brunei Darussalam, there is a community of family caregivers for people with dementia who possess varying levels of experience, formal training, and knowledge in caring for individuals with dementia. Thus, the World Health Organisation (WHO) developed a support manual known as *iSupport* with the goal of alleviating caregiver burden, as the physical and mental demands of a dementia caregiver can be arduous. *iSupport* includes comprehensive information about dementia, training programmes for inexperienced caregivers, and coping aids. Although the information offered in the manual is beneficial, it lacks services that cater to the individualistic needs of the caregivers in Brunei. Hence, dementia caregivers will be recruited from Demensia Brunei (DB) and the Geriatric and Palliative Care Unit in RIPAS Hospital to undergo interviews where they will share their insights and experiences with *iSupport*. A series of recruitment strategies such as disseminating the online version of the manual to caregivers, advertising contents of the manual through

social media platforms including Instagram and Facebook, and organising an open session to talk and discuss iSupport have been implemented to facilitate participation. Further analyses are ongoing, but the findings from the study will be used to evaluate feasibility and create a more suitable adaptation of the iSupport manual within the context of Brunei.

**OP24. Intergenerational program initiatives with OMA in Indonesia.**

**Christiany Suwartono<sup>1</sup>, Michael Maitimoe<sup>2</sup>.**

**<sup>1</sup>Center for the Study of Sustainable Community, Faculty of Psychology, Atma Jaya Catholic University of Indonesia, Jakarta, Indonesia.**

**<sup>2</sup>Alzheimer's Indonesia, Jakarta, Indonesia.**

Since its establishment in 2007 by Dr Elizabeth "Like" Lokon, Opening Minds through Art (OMA) has enabled people with dementia to embrace a new role as artists and create beautiful artwork alongside intergenerational participants. Currently, Fulbright is bringing OMA to Indonesia, emphasising the significance of human connections, self-worth, independent decision-making, and mental well-being for individuals of all ages. By engaging in arts-based activities, OMA enhances the quality of life for older adults, particularly those with dementia, fostering joy and meaningful engagement.

The facilitator training program equips participants to independently implement OMA in various settings where older and younger adults can regularly interact. The training involved representatives from Atma Jaya Catholic University of Indonesia and Alzheimer's Indonesia. The results revealed that the majority (85.71%) of younger adult participants enjoyed and felt happy participating in this program with older adults and people with dementia. They described their session as inspiring, enjoyable, exciting,

enlightening, happy, and uplifting. However, 14.29% expressed frustration due to the behaviours exhibited by people with dementia, highlighting the need for more time for meaningful activities and engagement. They felt a sense of desperation. Nevertheless, the most memorable moments for the participants were the older adults' smiles and sparkling eyes. All of the young participants acknowledged experiencing difficulties initially, but they managed to overcome them in the end.

Moving forward, the implementation of the OMA program between Atma Jaya and Alzheimer's Indonesia will serve as post-diagnostic support, providing treatment and care for people with dementia not only in Jakarta but also in various cities across Indonesia.

**Session 6: Support for dementia carers**

**II.**

**28<sup>th</sup> October 2023 4:30 – 6:00pm (Bilik Sepakat 3)**

**OP25. Evaluation of the long-term use of a cognitive testing smartphone application among community-dwelling older Malaysians.**

**Roshalina Rosli<sup>1</sup>, Maw Pin Tan<sup>2</sup>, Sobiitraa Kumanan<sup>1</sup>, Xin Ning Wong<sup>1</sup>, Nor Fazlin Zabudin<sup>1</sup>, Xiang-Jiang Xu<sup>3</sup>, Spencer Low<sup>3,4,5</sup>, Sherral A. Devine<sup>3,6,7</sup>, Nicole Kim<sup>6</sup>, Michael Hermanto<sup>6</sup> and Rhoda Au<sup>3,4,5,8</sup>.**

**<sup>1</sup>ACT4Health Consultancy and Services, Petaling Jaya, Malaysia.**

**<sup>2</sup>University of Malaya, Kuala Lumpur, Malaysia.**

**<sup>3</sup>Boston University Chobanian & Avedisian School of Medicine, Boston, MA, USA.**

**<sup>4</sup>Davos Alzheimer's Collaborative, Philadelphia, PA, USA.**

**<sup>5</sup>Boston University School of Public Health, Boston, MA, USA.**

**<sup>6</sup>Davos Alzheimer's Collaborative, Bos-**

ton, MA, USA.

<sup>7</sup>**Framingham Heart Study, Boston University Chobanian & Avedisian School of Medicine, Boston, MA, USA.**

<sup>8</sup>**The Framingham Heart Study, Boston University School of Medicine; Boston University School of Public Health, Boston, MA, USA.**

**Background:** Capturing and tracking subtle cognitive changes which signal pre-symptomatic early Alzheimer's disease is now the paradigm in dementia management. The limited availability of affordable tools especially in Lower- to middle-income countries (LMIC) like Malaysia, is attributed to population diversity with challenges in cultural and educational bias and the requirement for multiple translations for written tools.

**Objective:** To evaluate the feasibility of a smartphone application for early detection of cognitive decline among community-dwelling older Malaysians over time.

**Study design:** Participants were identified from the Transforming Cognitive Frailty into Later-Life Self-Sufficiency (AGELESS) cohort who were aged 55 years and above and were recruited through electoral rolls and sampling frames. This study is ongoing with a targeted sample size of 1000 participants.

**Method:** Recruitment commenced in October 2022. Participants are invited to attend a community-based research hub for baseline assessment and training on the smartphone application for cognitive testing, developed by Linus Health (Boston, Massachusetts, USA) as part of the Davos Alzheimer's Collaborative. The app measures cognitive skills and capabilities, balance and walking, sleep quality and post-traumatic stress disorder. Follow-up testing is conducted 3 monthly for 2 years and will be performed by participants in their homes. Technical support and issue reports will be actively resolved and documented.

**Current basic demographic and Expected outcome:** 596 participants have been recruited, mean age of 67.92 and 58.3% fe-

male. 51.8% received tertiary education. Regular meetings were held between the Boston and Malaysian teams to refine the protocol. The potential feasibility of such a tool will contribute to the cost-effective detection of predementia syndrome, making the prevention or curative treatment for dementia a real possibility for LMIC.

**OP26. Empowering individuals and families living with dementia through digital technologies.**

**Noreena Yi-Chin Liu.**

**Universiti Brunei Darussalam.**

Dementia, a widespread condition affecting millions globally, entails cognitive decline characterised by memory loss, communication difficulties, and behavioural changes. This research investigates the role of digital technology in supporting individuals with dementia and their family caregivers, particularly during the pre- and early stages. A comprehensive review of existing studies focusing on dementia support for both patients and caregivers is presented.

Furthermore, the research introduces "Tea Time," a game developed specifically for family caregivers coping with patients in the early stages of dementia. The game comprises five mini-games that must be completed to brew a cup of tea. These mini-games effectively convey the five essential messages about dementia as advocated by the organisation Dementia Friends.

Games platforms hold tremendous potential as effective tools for supporting dementia care communities. They offer opportunities for self-awareness, access to pertinent resources, and informed decision-making within the context of health journeys.

**OP27. Developing Immersive Gamification Technology Systems for the Management of Behavioural and Psychological Symptoms of Alzheimer's Disease Dementia (Phase 2 Trial).**

**Veeda Michelle M. Anlacan<sup>1,2</sup>, Roland Dominic G. Jamora<sup>1,2</sup>, Isabel Teresa O. Salido<sup>1</sup>, Angelo Cedric F. Panganiban<sup>1,3</sup>, Bryan Andrei C. Galecio<sup>1</sup>, Maria Eliza R. Aguila<sup>1,4</sup>, Cherica A. Tee<sup>1,5</sup>, Michael L. Tee<sup>1,6</sup>, Jaime D.L. Caro<sup>1,3</sup>.**

<sup>1</sup> **Augmented Experience Ehealth Laboratory.**

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<sup>3</sup> **Department of Computer Science, College of Engineering, University of the Philippines Diliman.**

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<sup>5</sup> **Department of Paediatrics, College of Medicine, University of the Philippines Manila.**

<sup>6</sup> **Department of Physiology, College of Medicine, University of the Philippines Manila.**

**Background:** Behavioural and psychological symptoms of dementia constitute a major component of the dementia syndrome and are strongly correlated with cognitive and functional decline. Virtual reality (VR) therapy is a non-pharmacological intervention currently being explored in the management of Filipinos living with dementia, due to its potential to enhance reminiscence and induce nostalgia through personalisation and cultural adaptation within a realistic virtual simulation of an experience. A local pilot study among healthy adults has shown that a VR intervention induced mild to no VR sickness, was positively received, and was easy to use by the participants. The study aims to expand upon the results of the prior study by testing a VR intervention among persons with mild to moderate Alzheimer's disease (AD) with behavioural and psychological symptoms.

**Methods:** A clinical trial among 30 patients with mild to moderate AD with behavioural and psychological symptoms is being con-

ducted: 15 patients will be randomly allocated to test a head-mounted display (HMD) system and the remaining 15 patients will be assigned to test the semi-cave automatic virtual environment (semi-CAVE) system.

**Results:** The clinical trial participants will test the VR intervention for four sessions held once a week for four weeks. The primary outcomes for assessment include clinical effectiveness (Neuropsychiatric Inventory-12), safety (Virtual Reality Sickness Questionnaire) and usability (System Usability Scale); cognition (Montreal Cognitive Assessment – Philippines, Mini-Mental State Exam, cognitive subscale of the Alzheimer's Disease Assessment Scale), activities of daily living (Alzheimer's Disease Cooperative Study - Activities of Daily Living Inventory) and quality of life (health-related quality of life for people with dementia) will also be assessed as secondary outcomes.

**Conclusion:** Recruitment and data collection for the clinical trial will be completed by January 2024.

#### **OP28. Suicidality among caregivers of people with dementia in Malaysia.**

**Arlina Arshad<sup>1</sup>, Ponnusamy Subramaniam<sup>2</sup>, Noh Amit<sup>1</sup>, Ahmed A. Moustafa<sup>3</sup>, Siobhan O'Dwyer<sup>4</sup>, Amer Siddiq Amer Nordin<sup>5</sup>.**

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<sup>4</sup> **School of Social Policy, University of Birmingham, United Kingdom.**

<sup>5</sup> **Faculty of Medicine, University Malaya, Malaysia.**

**Background:** Around 55 million people have dementia all over the world with 10 million

new cases every year. The number is expected to rise to 78 million in 2030 and 139 million in 2050. In the Malaysian setting, it is expected to nearly triple over the next 30 years. It is largely known that caregivers of people with dementia witness a progressive decline in the person's cognitive capacity, communication skills, and functional abilities (Cook et al., 2008) These problems may contribute to a range of negative physical and mental health outcomes (Cooper et al., 2007) with a consequent increase in caregiver's morbidity and mortality such as suicidality (Monin & Schulz, 2009). Therefore, this study is to explore the suicidality in caregivers of people with Dementia in Malaysia

**Methods:** A mixed method approach is taken. Screening will be done through the usage of Patient Health Questionnaire (PHQ-9) and Suicide Behaviours Questionnaire-Revised (SBQR) to screen and identify caregivers with suicidality. A total of 10 caregivers will be recruited for an in-depth interview. Semi-structured interview transcripts will be analysed thematically.

**Results:** Themes will be identified that are related to the experience of suicidality.

**Conclusion:** Suicidality among dementia caregivers may be a sensitive topic especially in certain cultures, however past research has shown the evidence of it. Exploring it may guide health professionals to identify ways to support carers experiencing suicidal thoughts.

**OP29. Reminiscence work with people with dementia: the development of culturally specific reminiscence module for promoting psychosocial well-being.**

**Ponnusamy Subramaniam<sup>1,2</sup>, Nurul Erni Nazira<sup>3</sup>, Khadijah Alavi<sup>3</sup>.**

<sup>1</sup> **Clinical Psychology and Behavioural Health Program, Faculty of Health Sciences, Universiti Kebangsaan Malaysia.**

<sup>2</sup> **Centre for Healthy Ageing and Wellness, Faculty of Health Sciences, Universiti Kebangsaan Malaysia.**

<sup>3</sup> **Social Work Programme, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia.**

**Background:** This study focuses on the development of culturally specific reminiscence content for people with dementia (PwD) in Malaysia, aiming to generate a positive psychosocial impact. Reminiscence work is a popular psychosocial intervention for PwD, and its effectiveness relies on the relevance of the contents to the cultural and historical background of the individuals.

**Methods:** The study utilises a mixed-method approach, divided into three work packages. In Work Package 1 (WK 1), 12 dementia care experts participated in a roundtable discussion, using the book "Remembering Yesterday, Caring Today: Reminiscence in Dementia Care" as a guide to establishing the dementia module framework. Work Package 2 (WK 2) involved 15 PwD and their caregivers in the identification of contents for each reminiscence theme, employing the Patient and Public Involvement (PPI) Exchange. Participatory design was employed to gain the "live experience" of PwD and make informed decisions on the reminiscence content. The primary source of content was derived from the works of legendary Malaysian actor P. Ramlee, who was active from 1945 to 1973, appearing in approximately 65 movies and composing 250 songs. Work Package 3 (WK 3) conducted a pilot study with 12 PwD to explore the feasibility of the culturally specific reminiscence module.

**Results:** WK 1 demonstrated a high inter-rater agreement (Cohen's Kappa = 0.85) among experts regarding the reminiscence framework with 12 themes. WK 2 findings indicated that PwD shared their lived experiences and identified meaningful video clips, music, dialogues, and songs for each reminiscence theme. WK 3 results showed that PwD were able to meaningfully relate their experiences to the culturally specific reminiscence module. Qualitative analysis revealed that the

group sessions with the reminiscence module triggered memories and supported positive emotional factors.

**Conclusion:** The developed reminiscence module holds broad applicability in promoting the psychological well-being of PwD.

**Session 7: Palliative care in dementia.**

**28<sup>th</sup> October 2023 4:30 – 6:00pm (Bilik Sepakat 4)**

**OP30. Integrating palliative care for older adults: Needs assessment for Hamad Medical Corporation's geriatric services in Qatar.**

**Farah Demachkieh<sup>1</sup>, Zavi Lakissian<sup>1</sup>, Ahmad Kassab<sup>1</sup>, Hala Mokdad<sup>1</sup>, Maha Akoum<sup>2</sup>, Stephen Connor<sup>3</sup>, Glenn Rees<sup>4</sup>, Brijesh Sathian<sup>5</sup>.**

<sup>1</sup> **SANAD, The Home Hospice Organization of Lebanon, Beirut.**

<sup>2</sup> **World Innovation Summit for Health (WISH), Doha.**

<sup>3</sup> **Worldwide Hospice Palliative Care Alliance (WHPCA), Washington, DC.**

<sup>4</sup> **Alzheimer Disease International (ADI), Canberra.**

<sup>5</sup> **Hamad Medical Corporation (HMC), Doha.**

**Background:** In Qatar, palliative care services have only been provided to oncology patients since 2008. In 2020, a needs assessment was conducted to explore the perceptions of older patients, family caregivers, healthcare providers and management about different palliative care aspects to identify readiness, barriers, and opportunities to the development of geriatric palliative care services, including dementia care.

**Methods:** The assessment included literature review, review of program data, key informant interviews, patient and caregiver survey and nurse and physician survey.

**Results:** A total of 33 key informant interviews, 100 surveys with older patients, 102

surveys with family caregivers and 141 surveys with nurses and physicians were conducted. Most older patients (96%) and family caregivers (92%) have never heard of palliative care. Fear of pain (35%) was the patients' most common concern in the last year of life. Both patients (47%) and caregivers (43%) described psychological support as the most common patient need. Around the clock access to healthcare professionals (54%) was the most common caregiver need. Most older patients wanted to know about their diagnosis (100%) and prognosis (99%) and have the final say in their treatment and medical management (93%). Most caregivers, physicians and nurses shared similar beliefs. However, patients (57%) and caregivers (47.5%) were less accepting of withholding resuscitation measures. Most patients (87%), caregivers (85%), nurses (81%), and physicians (79%) consider home the patient's preferred place of death.

**Conclusion:** Recommendations at different levels include (1) the development of a national palliative care strategy, (2) adopting a generalist palliative care approach (3) developing geriatrics specialised palliative care service, (4) integration of palliative care into undergraduate curricula, and (5) raising awareness.

**OP31. Strengths and shortcomings of policies and support services for older persons with dementia in the GCC Arab region.**

**Suzanne Hammad<sup>1</sup>, Hamed Al-Sinawi<sup>2</sup>, Sanaa Alharahsheh<sup>3</sup>, Vahe Kevahyan<sup>4</sup>.**

<sup>1</sup> **Independent Consultant & Adjunct Instructor of Sociology.**

<sup>2</sup> **Sultan Qaboos University, Oman.**

<sup>3</sup> **World Innovation Summit for Health, Qatar.**

<sup>4</sup> **University of Doha, Qatar.**

In a world of ageing populations, persons living with or at risk of dementia have been among the most vulnerable population

groups. Given their increased risk of comorbidities (namely diabetes, hypertension and depression), strengthening national responses to this particular population group has become a public health priority. In the context of global prioritisation of healthy ageing within public policies in the health and social care sectors, the Decade of Healthy Aging, and the predicted ageing surge in the Gulf Cooperation Council (GCC) Arab region, our study examines the extent to which the care and well-being of older persons living with dementia (PwD) has been safeguarded by governments, Non-Governmental Organisations (NGO), and communities in GCC countries. It takes stock of existing support structures and policies that support PwDs and their caregivers, as well as NGOs' community-based support services, undertakes a policy review of relevant public policies and services, and offers insights from key informant interviews invested in this sector. This contribution aims at synthesising the disparate efforts within the GCC region, with a view to identifying gaps, lessons learned and best practices that can enhance systems and policies which target older persons and their caregivers. Cross-fertilization of experiences across countries will support amplifying efforts and impacts in the region and beyond, highlighting common concerns and offering viable solutions.

**OP32. Bringing Namaste Care to people with dementia at end of life in aged care services.**

**Sharon Andrews, Sara Karacsony.**

**School of Nursing, College of Health and Medicine, University of Tasmania, Australia.**

In Australia, people living with advanced dementia (PLWAD) often transition to residential aged care facilities (RACFs) as they approach end of life. However, there is a pervasive assumption that PLWAD can no longer derive pleasure or engage in meaningful activity. This assumption has resulted in a paucity of

interventions or programs that specifically target quality of life at end-of-life for PLWAD. Evidence suggests that people with end stage dementia in RACFs often suffer behavioural changes, sensory deprivation, social isolation and loneliness. The lack of programs that specifically focus on the social and emotional needs of people with dementia who are extremely frail, functionally dependent and may no longer be able to verbally communicate, breaches their human rights, as outlined in the Universal Declaration of Human Rights (Article 5) and the Convention of the Rights of Persons with Disabilities (Article 30) to dignified, responsive, needs-based care that enables participation in leisure and meaningful activities.

In this presentation, we will discuss our research that is focused on implementing the Namaste Care Program into Australian RACFs. Namaste Care is a structure that provides tailored, multi-sensory activities to improve quality of life at the end-of-life. At the core of the program is the use of "loving touch" and meaningful engagement in a calm, comfort-focused environment. We argue that the Program offers not only transformative experiences of connection and comfort for PLWAD but is also a way of reframing care that values and upholds fundamental human rights for this population.

**OP33. Advanced care planning in dementia: A discussion from an Islamic perspective.**

**Asmah Husaini<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

**<sup>1</sup> PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam.**

**<sup>2</sup> Geriatrics and Palliative Unit, RIPAS Hospital, Brunei Darussalam.**

This discussion paper explores the concept of advanced care planning (ACP) for individuals with dementia in an Islamic country. It aims to provide a comprehensive understanding of the cultural, ethical, and religious considerations that would shape ACP in the context of



Islamic values. Through a critical analysis of an end-of-life care experience, this paper aims to inform healthcare professionals, policymakers, and families about the significance of culturally sensitive ACP for people with dementia in an Islamic country.

**Session 8: Treatment and dementia.**

**29<sup>th</sup> October 2023 11:00 – 12:30pm  
(Dewan Musyawarah)**

**OP34. Mouth care and oral health for people with dementia.**

**Nurul Sa'idah Ishak.**

**Special Care Dentistry Unit, Specialist Dental Clinic, RIPAS Hospital, Department of Dental Services, Ministry of Health, Brunei Darussalam.**

Dementia may come with functional limitations on daily life activities and social participation, including those related to oral health such as the ability to clean their own teeth, routine access to dental clinics, as well as the provision of dental procedures for people with dementia. Oral conditions such as dry mouth, gingivitis and dental caries, if left unattended, may cause pain and discomfort affecting their quality of life. Hence, early referral to the dental team will enable proper assessment, particularly on the oral health risks of dementia. The assessment will enable dentists to formulate a mouth care plan that is individualised and holistic for patients and their caregivers, and in line with the goals of care determined by their primary physicians.

**OP35. The chaotic Emergency Department (ED) and dementia patients: Strategies in ED to improve patient experience.**

**Nurul Bahriah Ali.**

**Emergency Department, RIPAS Hospital, Brunei Darussalam.**

Dr Nurul Bahriah Haji Ali is an Emergency

Physician currently working in the Emergency Department of Raja Isteri Pengiran Anak Saleha Hospital, the largest and only tertiary hospital in Brunei Darussalam. She trained in the United Kingdom and during training pursued her special interest in Geriatric Emergency Medicine. Her short presentation outlines the issues contributing to the challenges of providing healthcare to the older patients with dementia in a busy and chaotic environment making them more vulnerable than the general population. To compound the issue further, older patients are more likely to need admission to hospital and subsequently prolonged Emergency Department stay due to exit block and lack of hospital beds. Her presentation will also cover strategies being adopted across different health systems in order to make the Emergency Department safer for the older patient with dementia, and ensure their Emergency care needs are met.

**OP36. Common pitfalls when managing patients with dementia in the Acute Medical Unit.**

**Danny Lim Chin Guan.**

**Acute Medical Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

A presentation aimed at general physicians on the acute take on the common pitfalls encountered when assessing and managing patients with dementia in the Acute Medical Unit. Common pitfalls include, not getting sufficient information from the patient's family or carers, particularly a detailed frailty score, baseline level of cognition/function and any recent changes in the patient's condition. Doctors frequently rely entirely on a computerised prescription list without clarifying with the patient/family. It is important to assess the patient fully, observing their gait, observing them getting out of bed/chair and taking themselves to the toilet. Antibiotics are too often prescribed for spurious reasons such as "foul-smelling" urine or a positive urine

"dipstick". CT scans of the brain and abdomen are often unnecessary investigations & shouldn't be first line. In someone presenting with non-specific deterioration, a systematic approach is required; inspecting skin, pressure areas, feet, checking joints, bladder and stool chart. Commonly missed conditions are constipation, urinary retention, medication side effects, postural hypotension, pelvic fractures, infected pressure areas, aspiration pneumonia and inflamed/infected joints. For patients with a high level of frailty, particularly if they are approaching the last years of their life, there should be a conversation with the patient and their family on their wishes and concerns. Families will need space/time to discuss with each other, and there should be greater openness about end of life, treatment plans, realistic treatment goals, power of attorney and wills. This should be documented clearly, and if appropriate, completing DNAR's and "Advanced Healthcare Plans" to avoid unwanted and potentially harmful treatment against the patient's/ family wishes.

**OP37. Bone health and Dementia: Overcoming local challenges.**

**Chia Wei Tan.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

Osteoporosis is a common, progressive condition characterised by loss of bone density and microarchitecture, resulting in increased risk of fractures. The prevalence of osteoporosis increases with age, similar to that of dementia. In Brunei Darussalam, we have one of the fastest ageing populations worldwide. There remains a scarcity of information with regards to the prevalence of osteoporosis and fragility fractures at a population level.

People with cognitive impairment and dementia have been reported to have increased risk of falls, due to a multitude of factors, thereby increasing their risk of fragility

fractures. In addition, there have been studies which have identified genetic and environmental links between osteoporosis and dementia.

The main objective we have, like many other countries in the region, has been to bridge the treatment gap in order to reduce the risk and burden of fragility fractures in our ageing population. However, given resource and treatment limitations, and a lack of an in-depth understanding as to why the treatment gap remains locally, this isolated approach may not be time and cost-effective.

I coin the phrase "Prevention is better than Treatment (Cure)" and I believe this also holds true for where our country is at with respect to dementia management.

Therefore, a multi-faceted approach would be the most practical approach to reduce osteoporosis and the burden of fragility fractures locally, like we have with other chronic health conditions. We need to empower the public, both old and young, to take control of their health, enhance their understanding of the condition with the support of healthcare professionals. By adopting this "life-course" approach, we can build towards the nation's vision of a successful ageing community.

**OP38. Dementia care through nutrition.**

**Fakhri Mumin.**

**Dietetics Unit, RIPAS Hospital, Brunei Darussalam.**

As the ageing population grows, the number of people with dementia increases as well, with Alzheimer's disease being the most common cause of dementia. Alzheimer's disease is a chronic disease that affects cognitive function by worsening memory affecting the individual's ability to function independently in society, which can pose major health problems. At the present time, effective therapy for dementia has yet to be identified, and preventative approaches along with alleviating the risk for cognitive decline continue to

be the optimal method of managing this public health challenge. A number of modifiable risk factors have been identified that can ultimately delay or even prevent the development of dementia, which include hypertension, obesity, smoking, and physical inactivity. As many of these risk factors are inter-related, targeting them could potentially bring a cascade of health benefits to the individual who is at risk of dementia. A healthy diet plays a key role in creating a healthy life, as non-communicable diseases are risk factors for dementia (e.g., hypertension, type 2 diabetes) and can be reduced through good nutrition. Specific diets have been suggested by some studies that may help protect from Alzheimer's disease. This includes the Mediterranean diet, the DASH (Dietary Approaches to Stop Hypertension) diet, and the MIND diet (Mediterranean-DASH Intervention for Neurodegenerative Delay diet). This review evaluates the current literature on nutrition in the management of Alzheimer's disease.

**Session 9: Dementia awareness and friendliness II.**

**29<sup>th</sup> October 2023 11:00 – 12:30pm  
(Bilik Sepakat 3)**

**OP39. Applying a positive thought-flipping 'Think Brain Health' to reduce stigma and risk of dementia in the Chinese population in the UK.**

**Jennifer NW Lim<sup>1</sup>, Mei Champ<sup>2</sup>, Richard Cheston<sup>3</sup>.**

**<sup>1</sup> Faculty of Education, Health and Wellbeing, University of Wolverhampton, Wolverhampton, UK.**

**<sup>2</sup> School of Health and Social Wellbeing, University of the West of England, Bristol, UK.**

**<sup>3</sup> School of Social Sciences, University of the West of England, Bristol, UK.**

**Introduction:** There are 2,720 Chinese people over 65 years old living with dementia in

the UK, and this number is expected to rise to over 4000 people by 2025. However, there is no official data about the number who have a diagnosis and/or have accessed dementia services. There is also little research in this population - only one small study, involving nine Chinese carers, compared with more than thirty studies on the South Asian and Black communities, reporting on diagnosis, prevalence, knowledge, experience, and interventions is found. The Chinese medical term of dementia 'chi ngoi zing' or 'chi dai zheng' is perceived as derogatory and stigmatising; leading to poor help seeking and quality of life.

**Methods:** We tailored the first Alzheimer's Research UK's digital public health campaign, Think Brain Health, to meet the needs of the Chinese people and delivered the campaign in 5 major cities. We evaluated the effectiveness of the tailored Chinese Think Brain Health campaign using a pre-post study design and focus group discussions.

**Results:** We delivered the Chinese Think Brain Health campaign in 15 workshops in 5 major cities, co-designed culturally appropriate information posters and leaflets. The Chinese communities in the UK were invigorated by the Chinese Think Brain Health campaign. We have garnered interest in the topics of dementia and brain health: 76% of the 54 workshop participants said that they want to know more about dementia and brain health.

**Conclusion:** The positive "thought-flipping" term brain health has broken negative thinking about dementia for the Chinese people - shifting attention away from the derogatory and stigmatising Chinese medical term to achieve the goal of improving access to health services. Focusing on brain health rather than on dementia, a condition that causes the brain to deteriorate can address social stigma in culturally diverse communities.

**OP40. Raising awareness among frontliners on dementia.**

**Awang Mohd Norazlin bin Dato Paduka**

**Haji Kassim<sup>1</sup>, Awang Mohd Shamsul bin Haji Sanif<sup>2</sup>, Dayang Sastra Sarini binti Haji Julaini<sup>3</sup>, Dayangku Hajah Ena Suraya binti Pengiran Haji Mohammad<sup>4</sup>, Dayang Hajah Azizah binti Haji Mohammad<sup>5</sup>.**

<sup>1</sup> **Institut Perkhidmatan Awam, Prime Minister's Office.**

<sup>2</sup> **Radio Television Brunei, Prime Minister's Office.**

<sup>3</sup> **Information Department, Prime Minister's Office.**

<sup>4</sup> **Prime Minister's Office.**

<sup>5</sup> **Department of Islamic Studies, Ministry of Religious Affairs.**

The Community Outreach Project (COP) is a mandatory module of the Executive Development Program for Middle Management Officers (EDPMMO). The objective of the COP is to allow participants to experience working with NGOs and grassroots communities in providing aid in terms of ideas, policy suggestions and sustainability.

The group decided to focus on dementia and approached Demensia Brunei, an NGO advocating for a dementia friendly community. The group agreed to assist Demensia Brunei in raising awareness particularly amongst frontliners providing crucial services from the Royal Brunei Police Force, Department of Fire and Rescue, and the banking sector. Towards this endeavour, the group has named itself Ar-Ri'ayah or 'care' and 'protect' in Arabic. The group's motto is to 'Care, Protect, and Love' the community affected by dementia.

By the end of the COP, the group have successfully provided the following:

- 1) Designed and delivered physical infographics style posters to the Royal Brunei Police Force and the Department of Fire and Rescue on how to handle individuals suspected of having dementia. The posters were displayed at police and fire stations where frontliners serve.
- 2) Designed and provided both digital posters

and digital postcards to one of the local banks, Bank Islam Brunei Darussalam (BIBD) who have agreed to disseminate the posters internally via e-mail and internal Instagram. The postcards were put on digital display boards at various bank branches for the public to view. The posters had similar information on handling individuals suspected to have dementia whereas the postcards contained various short doa or prayers that can be performed daily to hinder the onset of dementia.

#### **OP41. Wise and Well: Toward Energising and Guiding the Aged Society.**

**Muhammad Syazwi Saifuddin Pg Hj Nasaruddin<sup>1</sup>, Mohammad Waldan Hamizan Yakub<sup>1</sup>, Muhammad Adib Wajdi Asrul Azmi<sup>1</sup>, Muhammad Hazman Awang Josli<sup>1</sup>, Ummi Nur Maizan Qistina Pengiran Zulkifli<sup>1</sup>, Alya Batrisyia Abdullah<sup>1</sup>, Shasha Aniisa Morshidi<sup>1</sup>, Amal Nadzirah Rosli<sup>2</sup>, Deeni Rudita Idris<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>, Asmah Husaini<sup>1</sup>, Fazean Irdayati Idris<sup>1</sup>.**

<sup>1</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

<sup>2</sup> **Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**Background:** Normal ageing is accompanied by a decrease in strength and power in motor performance. The rate of ageing in Brunei Darussalam is one of the fastest, with a predicted increase of 28.7% of older persons by the year 2050. As such, healthy ageing is a key target in achieving a high quality of life amongst the elderly community here in Brunei in accordance with Brunei Vision 2035.

**Methods:** Our group "Wise and Well" created the project "Towards Energising and Guiding the Aged Society (TEGAS)" to enhance the physical, cognitive, and social welfare of the elderly community in Brunei Darussalam through cognitive stimulation and strengthen-

ing and balancing exercises to further promote healthy ageing.

**Results:** Multiple interventions were performed, targeting the elderly community within the

nation. Interventions included sessions at Pusat Kegiatan Warga Emas (PKWE) centres, awareness booths in multiple settings, and a walkathon.

**Conclusion:** The team effectively carried out cognitive health programs at PKWE Brunei-Muara, PKWE Tutong, and PKWE Kuala Belait, and organized multiple public awareness campaigns. To culminate our event, and to further promote a healthy lifestyle, we successfully hosted a walkathon for both the elderly and the general public. We supported our interventions with educational pamphlets, educational posters, social media outreach, and national media coverage to ensure the long-term sustainability of our project.

#### **OP42. Public awareness programme for physical disability and accessibility in Brunei Darussalam.**

**Khaidiel Fiqrie Ahmad<sup>1,2</sup>, Nur Aimi Diyana Awang Damit<sup>1,2</sup>, Syahiirah Abdul Aziz<sup>1,2</sup>, Siti Munirah Awang Muhamad<sup>1,2</sup>, Nurolaini Pg Hj Muhammad Kifli<sup>1</sup>, Asmah Husaini<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>, Abang Muhammad Fahmy Hepnie<sup>1,3</sup>.**

<sup>1</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam**

<sup>2</sup> **Department of Internal Medicine, Raja Isteri Pengiran Anak Saleha Hospital, Brunei Darussalam.**

<sup>3</sup> **Brunei Neuroscience Stroke and Rehabilitation Centre, Pantai Jerudong Specialist Centre, Brunei Darussalam.**

**Background:** Dementia is a major cause of disability and dependency among the elderly. Issues such as lack of awareness, acceptance, and accessibility for people with disabilities continue to be a problem in Brunei. The aim of this project was to educate

the public regarding disability and how it could affect an individual at home and in the society.

**Methods:** Both media and contact-based interventions were employed targeting people of various ages and backgrounds. Educational tools such as posters and documentary films were utilised with support from the Health Promotion Centre, Brunei and Radio Television Brunei. Talent showcases and sharing sessions by people with disabilities were also conducted at our community event during which non-governmental organisations, private companies, and healthcare workers from multiple specialties were involved. Verbal feedback was collected from audience members who attended the event.

**Results:** Approximately 100 people attended our community event, with about 700 followers on our social networking platform. Many expressed empathy and appreciation of the struggles faced by people with disabilities. Mobility aids were collected as in-kind donations. The scope of the audience was expanded through participation in national television and radio interviews.

**Conclusion:** Education and contact-based programmes are still in demand in view of societal, emotional, and economic barriers such as stigmatisation, insufficient disabled parking and long waiting queues for people with disabilities. Our project was well received by the public. Such programmes should be conducted on a larger scale. Multiple operational areas, consistent use of media platforms, and advocate groups for disability and accessibility should be considered. Social and economic barriers should be addressed by the disabled, the public, and the relevant authorities for their inclusion and long-term benefits.

#### **OP43. PMK2F- Health and physical strength empowerment program for 60 years and above: A pilot study.**

**Asmah Husaini<sup>1</sup>, Shahrimawati Sharbini<sup>1</sup>.**

<sup>1</sup> **PAPRSB Institute of Health Sciences,**

## **Universiti Brunei Darussalam.**

There is strong evidence that strength training (resistance training or weightlifting, body weight for beginners), offers numerous benefits for the elderly. It can help improve muscle mass, bone density, overall physical function, fall prevention and balance, chronic disease management, psychological well-being and quality of life. The FINGER trial, a randomised controlled study, revealed that a multidomain lifestyle-based intervention can effectively prevent cognitive and functional decline in older adults at risk. Several countries, including Singapore and Australia, have already employed this multidomain strategy along with personalised counselling and group activities. However, adherence to these methods declines as interventions progress.

Drawing inspiration from the FINGER model's success, we initiated a four-week program amongst a group aged >60 years. This program focused on increasing awareness on the importance of strength and mobility training to sustain both physical and cognitive health. Participants were taught basic strength and balance exercises, correct posture and basic mobility focused on (Muslim) prayer movements. Participants engaged with the researchers once a week and were given workbooks to try at home. Positive feedback emerged from focus group discussions and written evaluations regarding the program. Participants reported increased stamina, strength and overall positivity. Enhanced ability to perform the exercises was clearly seen by researchers and felt by participants. Additionally, participants claimed that they had fun and experienced an overall uplift in mood and motivation to learn. This indicates favourable cognitive outcomes.

### **OP44. Art as a medium to create awareness about dementia in the Maldives.**

**Mariyam Fiyaza.**

**Alzheimer's Society of Maldives, Maldives.**

One of the major challenges that hinder early diagnosis of dementia in the Maldives is the lack of awareness. To address this issue, an awareness campaign focusing on Alzheimer's disease and other dementias was launched from July 2022 to November 2022. Various communication channels were utilised to target different segments of the population. Notably, art was employed as a medium to raise awareness about dementia. In collaboration with the artist and designer "Andhu," an art competition centred on the theme of "Dementia" was initiated in August 2022. The competition was exclusively for residents of the Maldives. The entries were categorised into three age groups and participants were encouraged to express their creativity through mixed medium and digital art. Information about the competition was disseminated through social media platforms; Facebook, X, Instagram and Viber and WhatsApp communication platforms. Maldives with 1190 islands (198 inhabited) scattered across a vast area of 90,000 square kilometres has its unique geographical challenges. To encourage participation from all across the country, we accepted artworks in digital format, using Viber. Initially, the response was limited, prompting an extension of the submission deadline till end of December 2022. With support from the Ministry of Education, the campaign received over 100 digitised artworks, with the majority falling between 10-16 years age group. Notably, these artworks showcased a strong effort to depict dementia, with many emphasising on memory. This experience underscores the importance of having a variety of strategies to create awareness and selecting appropriate mediums to effectively raise awareness. Additionally, it highlights the need to tailor campaigns to the unique context of the country and its diverse population. For future awareness initiatives, it may be beneficial to consider specific geographical and demographic factors and collaborate with important stakeholder institutions, to ensure the success of the campaign.

## **POSTER PRESENTATIONS**

**27-29 October 2023**

### **Dementia as a public health priority: COVID-19 and dementia**

#### **PP1. Audit of treatment for COVID-19 infections in older patients admitted under Geriatric Medicine.**

**Aimi Zunnurain Zulkipli<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

<sup>1</sup> **Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

<sup>2</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** Older people and people with dementia are at high risk of adverse outcomes from COVID-19 infections, such as hospitalisation and death. Initially, all patients with COVID-19 infections were admitted into a designated isolation hospital. After the second wave, these patients could be admitted to any hospital in specific COVID-19 wards, thus all clinicians had to be familiar with the COVID-19 treatment guidelines. Compliance with the treatment guidelines was audited to ensure that these vulnerable patients were managed optimally for COVID-19 infections.

**Methods:** This was a retrospective review of electronic medical records for patients admitted under Geriatric Medicine in RIPAS Hospital with COVID-19 infections between 1st April 2022 and 30th September 2022. The local guidelines recommended intravenous remdesivir for patients with risk factors for complications if they presented within a week of symptom onset, as well as dexamethasone and venous thromboembolism prophylaxis. Compliance to these guidelines were audited.

**Results:** Among the 41 patients, approximately two-thirds were wheelchair or bedbound, while more than 40% were fully dependent. Approximately half of the patients had a background of dementia. All the pa-

tients were considered at high risk for developing complications. Median length of stay was 16 days. Almost one in five passed away in hospital. The compliance rate of treatment with remdesivir was 82.9%, while among the oxygen dependent patients, treatment with dexamethasone and fondaparinux were 88.2% and 70.9% respectively.

**Conclusion:** While there appears to be a relatively high rate of compliance with COVID-19 management guidelines in older people admitted to RIPAS Hospital, there is still some room for improvement, given that older people and people with dementia are at high risk of poor outcomes with COVID-19 infections.

#### **PP2. COVID-19 vaccinations among Geriatric patients under home based nursing care in Brunei Darussalam.**

**Min Thant Kyaw<sup>1</sup>, Ei Mon Win<sup>1</sup>, Min Banyar Han<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

<sup>1</sup> **Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

<sup>2</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** Dependent older people and those with cognitive impairment are vulnerable to COVID-19 infections and associated complications. In Brunei, home-based nurses provide services to dependent older people in the community. The uptake of COVID-19 vaccines among these patients was evaluated.

**Methods:** This was a retrospective review of the electronic records of geriatric patients under home-based nursing care in December 2022. Epidemiological information including age, gender, mobility, reasons for immobility, cognitive function and COVID-19 vaccination status were collected. This was audited against local guidelines, recommending all older people have at least three doses, while those above 80 years should receive at least four doses of COVID-19 vaccines.

**Results:** There were 151 patients with a me-

dian age of 74 years (range 65- 100 years). There were 55 (36%) males and 96 (64%) females. There were 108 (72%) patients aged between 65-84 years, while 43 (28%) patients were above 85 years. The majority 124 (82%) patients were dependent in mobility while 27 (18%) patients were assisted mobility. The main reasons for immobility were frailty (49%) and stroke (40%). Nearly half of the patients (42%) had cognitive impairment. There were 17 (12%) unvaccinated patients, 5 (3%) patients had one dose, 80 (53%) had two doses, 43 patients (28%) had three doses and only 6 patients (4%) had four doses. There were only 3 (7%) patients above 85 years of age who received four doses of covid-19 vaccine. Among the 65-84 years age group, there were 37 (34%) patients who received three doses of covid-19 vaccine.

**Conclusion:** There is a low uptake of COVID-19 vaccination in older patients under home based nursing care in Brunei Darussalam. There is a gap to fulfil to improve accessibility of COVID-19 vaccination among older people, particularly those under home-based nursing care.

**PP3. High rate of frailty and dementia in Geriatric Medicine outpatients after the first wave of the COVID-19 pandemic in Brunei Darussalam.**

**Lih Vei Onn<sup>1,2</sup>, Noridah Halim<sup>1</sup>, Misli` Kula<sup>1</sup>, Shyh Poh Teo<sup>1,3</sup>.**

<sup>1</sup> **Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

<sup>2</sup> **NHS West Midlands, United Kingdom.**

<sup>3</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** Frailty is an increased vulnerability in developing negative outcomes, such as disability, hospitalisation and death. The COVID-19 pandemic is associated with in-

creased frailty and developing cognitive impairment or dementia. Geriatric Medicine Outpatient clinics are an opportunity to review patients for development of frailty or dementia, especially after the pandemic. The Edmonton Frail Scale (EFS) was used routinely in Geriatric Medicine outpatient clinics in RIPAS Hospital, the tertiary hospital in Brunei, to screen for frailty.

**Methods:** A retrospective review of the EFS records between June to July 2020, a period between the first and second wave of COVID-19 infections was performed. As there was no community spread at that time between the two waves, Geriatrics Clinics in RIPAS Hospital resumed as usual. Data collected from the EFS forms were entered into Excel and analysed.

**Results:** There were 60 patients with median age of 82 years. The majority (81.7%) were female. There were 55% Malays, 28.3% Chinese and one Indonesian patient. The main reasons for clinic review were multiple medical issues in half the patients, and cognitive impairment in a quarter. Most were wheelchair transfer, with a quarter having independent mobility. One in ten had depression, while over 60% had dementia. The median EFS score was 8 (moderate frailty). A quarter of the patients had mild frailty; another quarter had moderate frailty while one-third was classified as severe frailty.

**Conclusion:** There was a high rate of frailty and dementia in patients attending Geriatric Medicine Outpatient Clinics in RIPAS Hospital, Brunei in a retrospective review after the first wave of COVID-19 infections in Brunei. There is a need to monitor for frailty and dementia in older people, as well as interventions to maintain physical and cognitive abilities of older people during and after the pandemic.

**PP4. The experience of people with dementia participating in CRPD reports easy read working group.**

**Sheng-Tang Lin, Yun-Ching Chen, Pei-Hsuan Lee.**



### **Taiwan Alzheimer's Disease Association.**

In daily life, if the text content is too complex, it may cause trouble for people with dementia. Taiwan's government submits a national report every four years, explaining the government's actions in protecting the rights of the physically and mentally disabled. The National Human Rights Commission and civil society organisations also submit response reports. However, this information is complex, and it is necessary to make it easier to read to help people with disabilities understand and confirm whether their voices are being expressed. Taiwan Alzheimer Disease Association (TADA) was invited by the League for Persons With Disabilities, R.O.C(TAIWAN) to join the "CRPD Reports Easy Read Working Group" in 2022 and cooperated with other organisations of different types of disabilities. TADA was responsible for inviting four people with dementia to participate in the discussion and provide support in the process. It is worth mentioning that this is the first time that people with dementia have been invited to participate in relevant work. During these two years, we conducted 15 meetings and completed easy-to-read versions of two reports. Suggestions provided by people with dementia include: the use of words to improve understanding, simplification and matching of pictures and texts, the way of annotation, etc. TADA believes that "helping people with dementia understand the spirit and purpose of an easy-to-read, suitable environment, support and guidance, process planning, flexible attitude, and promoting the voice of people with dementia" are the key points for the implementation of easy to read. This article also hopes to share how the Easy Read Working Group works, the experience of people with dementia, as well as our reflections and future suggestions.

**Dementia, human rights and equitable society.**

**PP5. Do not forget us or leave us behind: vulnerable people in a humanitarian crisis and palliative action plan for Garo Hills, Meghalaya.**

**Sachin Dwivedi<sup>1,2</sup>, Sunjida Shahriah<sup>1,3</sup>, Suman Seshkar<sup>1</sup>, Somaye Pouy<sup>1,4</sup>, Sidharth Puri<sup>1,5</sup>, Hemdeep Kaur<sup>1</sup>, Shyh Poh Teo<sup>1,6-7</sup>, Sucheera Amornmahaphun<sup>1,8</sup>, Shoon Mya Aye<sup>1</sup>, Risa Vernette N Sangma<sup>1</sup>, Harjot Singh<sup>1,9</sup>, Zannat Ara<sup>1</sup>.**

<sup>1</sup> Fellowship in Palliative Care programme, Institute of Palliative Medicine, India.

<sup>2</sup> Center of Excellence in Nursing Education and Research, All India Institute of Medical Sciences, Rishikesh, India.

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In mid-2022, Garo Hills, Meghalaya on the border of India and Bangladesh was struck by floods and landslides. This region is difficult to access due to long distance by road and poor infrastructure, with limited availability of health services, education and a high poverty rate. A team member shared a story of witnessing an old lady alone on a make-shift boat floating across the river from an Indian border. It is likely that hundreds are affected, deaths occurred from floods, and dependent, immobile, frail, or people with dementia are left behind. The high rate of suffering and

death indicates an urgent need for palliative care services. An action plan for these vulnerable people in a humanitarian crisis was drafted. The strategy for convincing stakeholders including layperson carers spans three different target groups: national or international support, neighbouring regions and the Garo Hills community. From the national or international level, awareness regarding the crisis is required, identifying associations that may provide supplies, aid or funds. For neighbouring regions and the local community, narrative based meetings and action learning groups to strengthen community networks and develop compassionate communities is essential to support and sustain people needing palliative care as a basic human right. A four-phase approach is suggested to ensure sustainability of services, with a recommended curriculum or topics covering essential skills in provision of care. It is hoped that this framework may be applied to other similar disaster situations to reduce suffering of vulnerable people in a humanitarian crisis.

#### **Dementia policies and plans.**

##### **PP6. Framework for healthy ageing in Brunei Darussalam.**

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There is a growing concern on the trend of ageing population in the region of South-East Asia (SEA), which may result in heavy socio-economic implications and burden on the healthcare system. The World Health Organi-

sation (WHO) and United Nation (UN) have identified this issue and released multiple guidance on Healthy Ageing. A framework on healthy ageing adapted to Brunei Darussalam's context was developed guided by WHO's Regional Framework for Healthy Ageing (2018-2022) and UN Decade of Healthy Ageing 2021-2030 are described, with hopes to propel policy makers and the government to create necessary changes for healthy ageing in Brunei Darussalam.

##### **PP7. Dementia research blueprint for a dementia research framework in Brunei Darussalam.**

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<sup>2</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

The World Health Organisation published a blueprint for dementia research. It summarises different aspects of dementia research required globally and acts as a guide for policy-makers, funders and researchers to plan future research on dementia. There are 15 strategic areas, ranging from epidemiological data, biomarkers, risk factors and risk reduction, to developing novel therapies and improving clinical trials, as well as legislative and regulatory environments.

The WHO Dementia Research Blueprint was used as a reference to identify research that can be carried out in Brunei Darussalam. As the national dementia research capabilities are underdeveloped, it is not currently feasible to carry out research related to genetic or molecular aetiologies of dementia, biomarkers, population-based studies of risk factors or intervention studies across the life course. The lack of biomarkers precludes studies on novel therapeutic agents, such as monoclonal antibodies. However, it is feasible to contribute data related to local epidemiolo-

gy, clinical assessments and culturally appropriate approaches to dementia management. The groundwork should also be laid to carry out more advanced dementia research, including setting up local frameworks or guidance for carrying out dementia research, and exploring collaborations with other international trials.

### **Healthcare system readiness.**

#### **PP8. Prevalence of dementia in Acute Medical Unit wards.**

**Khaidiel Ahmad, May Tha Zin Nwe, Justin Fook Siong Keasberry.**

**Acute Medical Unit, Raja Isteri Pengiran Anak Saleha Hospital, Ministry of Health, Brunei Darussalam.**

**Background:** Dementia is the seventh cause of death worldwide and is underdiagnosed in hospital wards. It is predicted that around 7500 patients in Brunei will have dementia by 2050. The available literature about the number of patients with cognitive impairment or dementia admitted to the Acute Medical Unit (AMU) wards is sparse. The aim of this study was to explore the prevalence of patients with cognitive impairment and dementia admitted into Acute Medical Unit wards.

**Methods:** Data over a period of 4 months was obtained utilising descriptive study methods involving retrospective review of electronic medical records. Demographic data, length of stay and mortality data were sought. The likelihood of cognitive impairment and dementia amongst admitted patients were recorded.

**Results:** A total of 98 out of 1037 patients (9.5%) admitted to AMU wards from January to April 2023 were identified as having cognitive impairment or dementia. Of these 98 patients, 35 (36%) were confirmed as having cognitive impairment or dementia during their admission to AMU wards whilst 63 (64%) patients were suspected to have cog-

nitive impairment. Of all the 98 patients, only 33 patients (34%) had geriatrics specialty input. Interestingly there were a greater number of female patients admitted who also had a lower mortality rate compared to the male patients.

**Conclusion:** This study suggests that cognitive screening tools and Geriatric referral services are underutilised. Strategies to improve the recognition of patients with cognitive impairment would include increasing recognition by health professionals, education of caregivers, timely referrals to geriatric unit doctors as well as adapting the environment. There also appears to be the utility of a dementia outreach health professional. Cognitive impairment and dementia are underdiagnosed in AMU wards in RIPAS hospital. There are opportunities to improve on the documentation, assessment and care towards provision of excellent and personalised care for these patients in the AMU wards.

#### **PP9. Evaluation of service and cognitive scores of cases referred to BNSRC Clinical Psychology Unit.**

**Keen Lyn Lee, Dyg Nurauni Hamizah Awg Mohamed Ali, Sheikh Hj Azimin Sheikh Hj Said.**

**Brunei Neuroscience Stroke and Rehabilitation Centre, Pantai Jerudong Specialist Centre, Brunei.**

**Background:** The wait time, attendance and completion of baseline assessments are important markers in the assessment of a health service quality. This study was therefore conducted to evaluate the efficacy of service deliverance and baseline cognitive scores for cases referred to the BNSRC Clinical Psychology Unit in the year 2022.

**Methods:** This cross-sectional study was conducted on 387 referred patients, collected using periodic administrative recording on Microsoft Excel whereas Pearson's correlation analysis was conducted using SPSS 26 for the variable of wait time and mood scores. Cases

with missing or incomplete data were removed from further analysis.

**Results:** An overall high attendance rate (83.5%) was recorded, with the mean age of 52 ( $\pm$  17.3). The average waiting time to see a psychologist as an inpatient is an average of 14 days ( $\pm$  35) whereas outpatient referrals have an average wait time of 37 days ( $\pm$  50). Correlation analysis revealed no significant effect of time on patient's mood scores, regardless of inpatient or outpatient setting. Of those referred, a moderate rate of baseline assessment completion was found, with 54% and 43% for depression and anxiety screening respectively, followed by 42% for completion of at least one baseline cognitive screening tool. The average baseline score for cognitive screening was obtained, with Mini Mental State Examination (n = 183) found to be at 25 ( $\pm$  6), Montreal Cognitive Assessment (n = 159) is at 22 ( $\pm$  7), and Frontal Assessment Battery (n = 127) is at 16 ( $\pm$  2).

**Conclusion:** Although these results suggest no significant effect of wait time on self-reported mood disturbance, areas for improvement lie in reducing the current turnaround time for patient care for all settings. The results further suggest that 41% of cases referred to the Unit returned scores indicative of Mild Cognitive Impairment, therefore requiring further readiness for intervention.

#### **PP10. Mealtime observational audit in Acute Medical Wards.**

**Aimi Zulkipli, Rasyiqatul Rameiny, Justin Fook Siong Keasberry.**

**Department of Internal Medicine, Raja Isteri Pengiran Anak Saleha Hospital, Ministry of Health, Brunei Darussalam.**

**Background:** There is a scarcity of literature regarding the prevalence of malnutrition amongst admitted patients in acute medical unit (AMU) wards. The estimates from malnutrition studies state the prevalence of malnutrition is between 20-50% in hospitalised older patients. Additionally, unwell older patients

with dementia are also admitted to AMU at the initial stages of their hospitalisation. This is the first quantitative audit of mealtimes amongst admitted inpatients in AMU wards.

**Aim:** To audit mealtime preparation and assistance amongst admitted AMU patients according to the Alberta mealtime toolkit.

**Methods:** A random lunchtime day was chosen in June 2023 and all 47 patients admitted to the AMU were audited with the mealtime toolkit observing the barriers during preparation and also the process of having a meal as well as assistance provided during mealtimes.

**Findings:** Positive findings were that the majority (>90%) of patients were awake, had a clear mealtime portable table, were in the correct upright position, and had enough lighting during the observed mealtime. Areas for improvement are for ensuring proper handwashing (31% patients had handwashing performed before the meal), having food within reach of the patients (12% of patients could not physically reach their food) and several patients required assistance with cutting of the food. The reasons for this deficiency of mealtime assistance are due to the lack of staff, therefore there is a need for reliance on family members to provide feeding assistance which is an acceptable cultural practice.

**Conclusion:** This mealtime audit provides an insight into the current workflows and strategies required to improve mealtimes at AMU wards. Older patients are more likely to have inadequate nutrition during their hospitalisation due to the lack of staff. This study provides more evidence to strengthen nursing staff numbers with nursing assistants that will likely improve the mealtimes especially for older patients admitted in AMU wards.

#### **PP11. ICOPE implementation framework in Brunei Darussalam.**

**Siti Zunainah Alek, Siti Munawwarah Tarif, Dayangku Salawati Pengiran Aji, Norhayati Kassim.**

**Health Promotion Centre, Ministry of Health, Brunei Darussalam.**

**Background:** The integrated care for older people (ICOPE) approach has been developed by the World Health Organization (WHO) in response to the world's rapidly ageing population. The percentage of the world's population 60 years of age and older will nearly double between 2015 and 2050. Therefore, it is crucial to adapt health systems and services to older people's requirements in order to deliver high-quality, integrated care that is also accessible and affordable.

**Methods:** Policy makers and program administrators can use the ICOPE Implementation Framework as a guide to analyse and measure the capacity of their services and systems to deliver integrated care at the community level. In order to enable the creation of ICOPE implementation action plans, it offers a scorecard to assess the overall ability of health and social care services and systems to deliver integrated care in community settings.

**Results:** For Brunei Darussalam, the scorecard was filled out by several healthcare professionals from varied backgrounds to determine Brunei's readiness to implement ICOPE. The scorecard has two domains; firstly, services which involves integration of health and social care services and secondly, systems which is the process of aligning care systems to facilitate integrated care. With a score of 14 out of 26, Brunei is currently in the beginning stages of implementation for services. In terms of systems, Brunei only received a score of 10 out of 26, which indicates little to no implementation.

**Conclusions:** The results from the scorecard indicated that numerous initiatives and improvements must be made in order for ICOPE to be successfully implemented in Brunei Darussalam as Brunei is still in between minimal implementation to initiating implementation stages.

**Dementia awareness and friendliness:**

**Attitudes, awareness and stigma.**

**PP12. Knowledge and attitudes towards dementia of Neuroscience Centre staff in Brunei Darussalam.**

**Kyaw Zay, Suriyati Kalman, Rosimah Sidek, Zawatilamal Ismail, Jane R. Maravilla, Jessie T. Colacion.**

**Brunei Neuroscience Stroke and Rehabilitation Centre (BNSRC).**

**Background:** The growing number of elderly population in Brunei Darussalam will lead to a substantial increase in the number of people with dementia (PwD). Adequate knowledge and favourable attitudes towards dementia among hospital staff is important to provide quality care for this vulnerable group. Brunei Neuroscience Stroke and Rehabilitation Center (BNSRC) is the forefront of tertiary institutions in Brunei for all neurological disorders including dementia. This study aims to explore the level of knowledge and attitude on dementia and PwD among the clinical and non-clinical staff of BNSRC.

**Methods:** A 7-day cross-sectional survey was conducted on clinical (n=129) and non-clinical (n=34) staff of BNSRC. Non-neurology doctors, nurses, therapists, allied health and support staff who would have potential contact with PwD were included. Using an online survey format, the dementia knowledge and attitudes were assessed using two validated tools: Dementia Knowledge Assessment Tool Version 2 (DKAT-2) and Dementia Attitude Scale (DAS).

**Results:** Majority (63%) of the participants demonstrated above-average knowledge on dementia (over 60% score) and 96% have positive attitudes (>70 points) towards PwD. The clinical staff have higher knowledge mean scores (67%) compared to non-clinical staff (45%). Dementia knowledge mean scores were also proportionate with the level of education or qualification. For attitude towards dementia, the more senior staff (in age

and position) showed the most positive attitudes. Clinical staff showed better attitudes towards dementia (m=98 points) compared to non-clinical staff (m=83 points). It can also be speculated that attitude towards dementia is directly proportional to the knowledge on dementia.

**Conclusion:** This study showed that although dementia knowledge and attitudes are generally optimistic amongst BNSRC staff, it still has room for improvement. Educating the staff would likely bring better attitudes towards PwD, and eventually create a safer environment and better quality of care for such patients.

**PP13. Supporting Demensia Brunei: Engagement through community awareness.**

**Ir. Awang Mohammad Hisham bin Haji Suhailee<sup>1,2</sup>, Hajah Wan Aslina binti Haji Ibrahim<sup>1,3</sup>, Pengiran Hajah Haslina Suri-ani binti Pengiran Haji Piut<sup>1,4</sup>, Syed Rozman bin Haji Syed Abdul Rahim<sup>1,5</sup>, Maureen Chong Siew Fang<sup>1,6</sup>, Mohd Khairul Shahrul bin Haji Duahim<sup>1,7</sup>, Hajah Nur Hamizah binti Haji Ismail<sup>1,8</sup>.**

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<sup>5</sup> Department of Scholarships Management, Ministry of Education.

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<sup>7</sup> Department of Community Development, Ministry of Culture Youth and Sports.

<sup>8</sup> Wawasan Brunei Office, Prime Minister's Office.

The study focused on designing a project concept to promote dementia-friendly communities through raising awareness on nature and

impact of dementia, and care management for people with dementia in Negara Brunei Darussalam. The project concept involved implementation of two major events: the roadshow series and public awareness campaign. A total of 398 personnel from three ministries participated in the two-days roadshow series and 222 participants completed the online survey. The analysis of the online evaluation survey data from the roadshow series showed a positive impact on the changes of the awareness level of the participants. All 222 participants (100%) agreed that the organisation of the roadshow series was well-implemented with clear stated objectives and the contents were well-organised within the appropriate duration. The most significant impact of the project was that all 222 participants (100%) agreed that they will apply the knowledge gained from the roadshow series. In addition, the roadshow series was highly rated at 4.35 out of 5 points. The public awareness campaign was implemented through a media briefing and distribution of 60 banners and posters with the message "five ways to reduce risks of dementia" to key stakeholders in order for the awareness message to reach out to the wider communities. The overall findings provide an overview of the evidence on the project concept supporting the creation of a dementia-friendly community. The project concept will serve as a blueprint, guiding other research in creating a lasting impact and continually improving the circumferences of individuals facing dementia challenges. In addition, future recommendations should also include developing and implementing a national dementia policy which includes the creation of dementia-friendly community towards healthy aging.

**PP14. Awareness building and improving participation of local communities on the need for good palliative care in dementia.**

**Sunjida Shahriah<sup>1,2</sup>, Sachin Dwivedi<sup>1,3</sup>, Suman Seshkar<sup>1</sup>, Somaye Pouy<sup>1,4</sup>, Si-**

**dharth Puri<sup>1,5</sup>, Hemdeep Kaur<sup>1</sup>, Shyh Poh Teo<sup>1,6-7</sup>, Sucheera Amornmahaphun<sup>1,8</sup>, Shoon Mya Aye<sup>1</sup>, Risa Vernetta N Sangma<sup>1</sup>, Harjot Singh<sup>1,9</sup>, Zannat Ara<sup>1</sup>.**

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Dementia is a chronic progressive neurodegenerative disease. Palliative care is an essential service for incurable diseases, with a goal of improving symptoms and maintaining a good quality of life. The public awareness of palliative care and participation by local communities is essential to improve the uptake and access to relevant care services. As part of a Fellowship in Palliative Care, palliative fellows from Bangladesh, Brunei, India, Iran, Myanmar and Thailand were required to prepare an action plan and targets for intervention to improve awareness and participation of society. For awareness building, social media campaigns, National Palliative Care Day programmes and food festivals were suggested. The use of stories and testimonials to stimulate conversations regarding palliative care and dementia, which may improve un-

derstanding among patients and families, as well as healthcare workers. A 'human library' project where people and their experiences are used as resource materials was piloted in Bangladesh, which was well-received in the community. In order to improve participation, community volunteer development programmes and medical students palliative care projects were proposed. Community nurses as champions for cross-specialty collaborations and training workshops for people with non-communicable diseases may bridge different groups to discuss palliative care in dementia. The 'adopt a grandma' initiative allows intergenerational participation in provision of care and company. The introduction of these initiatives as pilot programmes is expected to improve awareness and community participation in provision of palliative care for people with dementia.

**Community / public-private-people partnerships.**

**PP15. Senior Citizen Activity Centres: A platform to raise awareness on dementia.**

**Siti Zunainah Alek, Siti Munawwarah Tarif, Dayangku Salawati Pengiran Aji, Norhayati Kassim.**

**Health Promotion Centre, Ministry of Health, Brunei Darussalam.**

Dementia afflicted 50 million individuals globally in 2015 and the number of dementia patients is anticipated to rise to 82 million by 2030 and 152 million by 2050 (WHO, 2019). Though dementia primarily affects older persons, it is not a normal component of ageing. The risk of dementia can be prevented by practising a healthy lifestyle. Brunei Darussalam heavily supports and promotes healthy ageing and well-being of the older people in line with Senior Citizen Plan of Action. One of the ways Brunei promotes healthy ageing is

through conducting a health programme with the Senior Citizen Activity Centre (Pusat Kegiatan Warga Emas, PKWE). PKWE was founded with the goal of becoming a platform for the older people to become more active and to improve their quality of life and well-being. Various activities are conducted which aims at maintaining and improving the physical and cognitive well-being of the older people. For example, PKWE Tutong has a schedule for its activities such as health, arts and handicrafts, Quran recitation and sports. However, most of the activities conducted at PKWE aims to promote the health of the older people in general, there is a limited number of programme that particularly aim to reduce the risk of dementia. Therefore, it is recommended to conduct more dementia risk reduction activities that help to increase awareness on dementia. Education activities and other new cognitive skills can be taught at the Centre allowing older people to learn new skills and maintain an active mind. In addition to this, community dementia screening programme should be undertaken at least twice a year. Early detection and prevention of those at risk of dementia can be achieved through regular screening.

**PP16. Public-Private-People Partnerships for a dementia friendly outdoor spaces and buildings, transport and enablers for social participation.**

**Zin Mar Tun<sup>1</sup>, Yusnida Yussof<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

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A dementia friendly community is a community that aims to provide an environment which is supportive, inclusive and respectful of the needs of people with dementia. This usually entails improved awareness and edu-

cation to reduce stigma and increase the understanding of dementia, accessibility, social inclusion, supportive services and multisectoral collaboration.

Public-private partnerships are important for creating a dementia friendly community for several reasons: dementia-friendly initiatives require financial and human resources, which can be pooled from both public and private sectors. This ensures sustainability and inclusivity with a diverse range of stakeholders involved in this initiative. There is also a need to leverage networks and scale up these efforts for a more significant impact to the community. The private sector may provide expertise and specialised knowledge for implementing dementia-friendly programmes to ensure innovative approaches and technology is available to address the complex needs of people living with dementia. Private organisations can also support research and data collection to guide evidence-based decision making and programme improvement.

Public-private-people partnerships for a dementia friendly community are proposed, focusing on dementia friendly outdoor spaces and buildings, transport and enablers for social participation.

**Dementia and design – environment, architecture.**

**PP17. Signage and wayfinding audit for RIPAS Hospital, Brunei Darussalam.**

**Lim Rui Shuan<sup>1</sup>, Min Banyar Han<sup>2</sup>, Nadzirah Rosli<sup>2</sup>, Wardina Baharin<sup>1</sup>, Shyh Poh Teo<sup>2,3</sup>.**

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## **russalam.**

**Background:** Older people or people with dementia are prone to getting lost in unfamiliar environments, especially hospitals. Signage and wayfinding posts are essential to assist with navigation around the hospital. The signages in RIPAS Hospital, Brunei were evaluated.

**Methods:** Two routes were audited, planned based on services or stops older people frequently visit. Route 1: Outdoor car park – hospital entrance – toilet – elevator to ward 19 (third floor) – cafeteria – orthopaedics outpatients (specialist building, ground floor) – pharmacy. Route 2: Outdoor car park (near laundry) – medical social worker (MSW) office – speech language therapist office – physiotherapy – phlebotomy – basement car park area.

**Results:** Route 1: Directories for the floors and wards were provided clearly in the lobby area. There was a lack of and difficulty in finding proper signages to the wards on some floors. There are no signs for the specialist building from the main entrance until the flyover passage. However, the signages were too small to be easily visible on the way to the specialist building before reaching the flyover area. Signposts were only visible on reaching the destination for both pharmacy and the specialist building. Route 2: Signages for MSW and nearby departments were existent only inside the building. No signages were available to direct visitors to the physiotherapy and occupational therapy department. The signboard was only visible after turning from the main corridor towards the department. The multiple units listed on the sign for the laboratories were quite confusing. There was a lack of signage to exit the hospital building or to the parking lot.

**Conclusion:** The signage system in RIPAS Hospital could be improved. Signs should be clear and concise, easily visible and understandable at a glance and contain both the Malay and English languages. Digital signages

and maps of specific locations may also help people with their journey around the hospital.

## **PP18. Wheelchair accessibility audit for RIPAS Hospital, Brunei Darussalam.**

**Wardina Baharin<sup>1</sup>, Nadzirah Rosli<sup>2</sup>, Min Banyar Han<sup>2</sup>, Lim Rui Shuan<sup>1</sup>, Shyh Poh Teo<sup>2,3</sup>.**

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<sup>3</sup> **PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** A person with dementia is vulnerable to the impact of the built environment. Health services, businesses, and recreational areas should be accessible for everyone to prevent social isolation. The accessibility of RIPAS Hospital, the tertiary hospital in Brunei was evaluated.

**Methods:** Two students from the Faculty of Social Sciences, Universiti Brunei Darussalam evaluated accessibility of two pre-planned routes, based on services or stops older people frequently need. Route 1: Outdoor car park – hospital entrance – toilet – elevator to ward 19 (third floor) – cafeteria – orthopaedics outpatients (specialist building, ground floor) – pharmacy. Route 2: Outdoor car park (near laundry) – medical social worker office – speech language therapist office – physiotherapy – phlebotomy – basement car park area.

**Results:** Route 1: The main path from the carpark to the main hospital was blocked, as nearby wards were used for COVID patients. Users had to go past a barrier gate and onto the main road. Ramps were present to enable wheelchair access in all areas. The ward entrance was tinted and reflective, causing a glare. The tiled flooring in front of the cafeteria and specialist building was irregular and

was a trip risk. The flyover to the specialist building was steep; this made it difficult to push the wheelchair, which tended to tip backwards. Route 2: The shortest route from the carpark to the medical social worker's office was via steep stairs. Wheelchair users had to go onto the main road beside a large uncovered drain, without pedestrian pavements. The area outside physiotherapy was uneven, with striped tiles, which may be confusing. The basement carpark was poorly lit, making it difficult to navigate. **Conclusion:** There are several areas within the hospital that can be improved in terms of accessibility and safety. The hospital environment should be accessible, understandable, and easy to use, regardless of age, size, ability or disability.

**PP19. Environmental risk factors for falls in older people with hip fractures.**

**Nurul Bazilah Ali<sup>1</sup>, Amal Nadzirah Rosli<sup>2</sup>, Lih Vei Onn<sup>2,3</sup>, Burt Lee Han<sup>1</sup>, Shyh Poh Teo<sup>2,4</sup>.**

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<sup>4</sup>PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.

**Background:** Older people and people with dementia are at high risk for falls and subsequent injuries including hip fractures. Falls may occur due to underlying medical conditions, poor mobility and environmental factors. Environmental causes for falls and barriers to mobility after falls or hip fractures should be identified.

**Methods:** This was a retrospective review of the national electronic health records (BruHIMS) of patients admitted with hip fractures admitted in 2016 to 2018 that were referred to Occupational Therapy. Clinical notes from

home visits were used to identify environmental fall risks.

**Results:** There were 137 (43.8%) patients with home visits performed, out of 313 patients admitted with hip fractures. Median age was 79 years. The majority (80%) were of Malay ethnicity. Most patients (65%) were independent with mobility prior to the hip fracture. The most common places for falls were the bathroom (19.7%), bedroom (16.8%) and outside the house (9.5%). Most common activities performed before the fall were mobility (39.4%) and transfers from bed (8.0%). Most patients (78.8%) lived in detached houses and most (71.5%) were two storey houses. The surface was uneven at the front of the house in 35%, with a drain in 10.2% in front, which most were uncovered. There were steps in the front entrance of 91.2% of the homes, with a mean of 2 steps and a median height of 4.5 inches for each step. Only 8.8% had rails at the entrance of the houses. Most of the houses had adequate spacing with most rooms including kitchens and bathrooms having a tiled floor surface.

**Conclusion:** Several environmental risk factors for falls and barriers that limit accessibility and mobility were identified from home visits by occupational therapists for older patients with hip fractures.

**PP20. Rooms and bed bays audit for RIPAS Hospital, Brunei Darussalam.**

**Amirsalman Nor Azman<sup>1</sup>, Nadzirah Rosli<sup>2</sup>, Shyh Poh Teo<sup>2,3</sup>.**

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<sup>3</sup> PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.

**Background:** Spatial disorientation and declining wayfinding abilities are among the early symptoms of dementia. A prerequisite to maintaining a patient's quality of life in a

hospital is their ability to orient themselves within their new environment. We aim to explore such factors which may improve orientation, safety and comfort for the patients.

**Methods:** An assessment of ward rooms and bed bays using The Hospital Environment Audit Tool (Victoria) was performed. We evaluated ward 19, one of the medical wards in RIPAS Hospital, Brunei Darussalam consisting of 27 beds where the majority of the geriatric patients were admitted.

**Results:** All the 27 beds in ward 19 were clearly numbered, had room for personal items to be stored, had chairs available for all patients and were clutter free. Nursing and allied health staff were able to write notes while in the bed bay. Several important features for orientation, such as clocks, calendars, pictures/paintings, bathroom signs, and light switches that are visible in the dark, were not available or visible from any of the beds in the ward. Other issues identified included obstruction against opening bedside drawers reported for 3 beds, difficulty reaching bedside tables for all beds, and only 11 beds having a clear view of the outdoors. Although all beds have call bells easily reached from their bed, 7 of the call bells were not functioning when checked.

**Conclusion:** There are several areas within the ward that can be improved in terms of orientation, comfort and safety. The hospital environment should be appropriately designed to reduce confusion and agitation, encourage independence and social interaction for patients regardless of age, ability or disability.

#### **PP21. Bedside hydration and nutrition audit for RIPAS Hospital, Brunei Darussalam.**

**Amirsalman Nor Azman<sup>1</sup>, Dr Nadzirah Rosli<sup>2</sup>, Dr Tan Chia Wei<sup>2</sup>.**

<sup>1</sup>Trinity College Dublin, Ireland.

<sup>2</sup>Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.

**Background:** Adequate hydration and nutrition are basic necessities which should be easily accessible in hospitals. Older patients, particularly those with dementia or cognitive impairment are at high risk of malnutrition and dehydration in hospital and can result in detrimental impact on clinical outcomes.

**Methods:** A cross sectional audit was conducted to assess the accessibility to food and water on medical wards where majority of geriatric in-patients are admitted to at RIPAS Hospital, Brunei Darussalam. We evaluated various factors, including the reachability of bedside tables before and after medical ward rounds, the placement of food during mealtimes, patients' ability to open a water bottle and the quantity of water and food the patient consumed.

**Results:** There were 46 occupied beds during the audit. The median age was 70 years old. Cognitive impairment was noted in 8 (17.4%) patients. Twenty-three patients (50%) were identified to be bedbound. More than half of the patients' (26) bedside table was out of reach before ward rounds. This significantly increased to 33 patients after rounds ( $p=0.002$ ).

Excluding patients being fed via nasogastric tube, 20 (60.6%) out of 33 patients' food and drink was placed out of reach during mealtimes. A significant drop in water consumption was seen in elderly patients ( $P=0.041$ ) and those with cognitive impairment ( $P=0.039$ ).

**Conclusion:** A significant proportion of patients' bedside tables was found to be out of reach post ward rounds. Healthcare workers and carers need to be educated on the importance of adequate hydration and nutrition and place more emphasis on ensuring easy access to food and water in hospital. Individualised hospital care plans should be created for older patients and those with cognitive impairment to minimise risk of dehydration and malnutrition.

**PP22. Environmental noise pollution: A consideration to improve patients' care in Raja Isteri Anak Pengiran Anak Saleha (RIPAS) Hospital, Brunei.**

**Muhammad Hanif Ahmad, Yusnida Yussof, Nabihah Matsah, Salwa Abdul Rahman.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**Background:** The World Health Organisation (WHO) defines noise above 65 decibels (dB) as noise pollution. Excessive noises may have significant consequences on patient experience and aggravate patients' health issues. The communication performance of healthcare professionals to patients may be impaired, which may subsequently lead to medical errors, misinterpretations and reduced healthcare quality. Little attention has been given to improving awareness of the impact of noise on people with dementia. Dementia can worsen the effects of sensory changes by altering the person's perception towards external stimuli such as noises. This can result in worsening agitation, wandering behaviour, increase in difficulty with care and possibility of risk with rapport breakdown.

**Methods:** A 2-week audit measuring the average and maximum noise in decibels (dB) via the use of a phone app (Decibel X) was performed in the medical wards of RIPAS hospital from 17<sup>th</sup> August 2023 to 30<sup>th</sup> August 2023. Day-time recordings were collected from the time of ward round commencement for a duration of 1 to 2 hours while night-time recordings were collected after office hours for at least 1 hour. Results were tabulated and the total average and maximum noises were averaged to provide final outcomes.

**Results:** Within the 2 weeks, the average day-time noise was 66.95 dB with a maximum level of 94.66 dB. This is remarkably higher compared to the night-time noise with an average of 59.2 dB with a maximum level of 83.26 dB.

**Conclusion:** Day-time reading demonstrated in this audit met the decibel criteria of noise pollution. A more detailed study is needed to determine and analyse the source of noise within medical wards to enable proactive interventions to create healing environments with reduced noise levels for all patients, especially those with dementia.

**Dementia friendliness.**

**PP23. Assessment of age-friendly hospitals and health centre in Tutong District: Pilot project.**

**Siti Munawwarah Tarif, Siti Zunainah Alek, Dayangku Salawati Pengiran Aji, Norhayati Kassim.**

**Health Promotion Centre, Ministry of Health, Brunei Darussalam.**

**Background:** The ageing population is increasing at a fast rate globally, including Brunei Darussalam in which it is expected to become an aged country by 2035. The World Health Organisation (WHO) has introduced a concept of an age-friendly cities and community including healthcare facilities to acknowledge the future changes in the ageing population. The age-friendly cities and communities are targeted to focus on the social determinants of health and eventually, impacting health inequalities.

**Methods:** The Health Promotion Centre, Ministry of Health has conducted a pilot assessment on the age-friendliness of healthcare facilities specifically Pengiran Muda Mahkota Pengiran Muda Haji Al-Muhtadee Billah (PMMPMHAB) Hospital, Tutong District and Pekan Tutong Health Centre in 2023. The main objective of the assessment is to analyse whether the healthcare facilities are age-friendly for older people, including those with dementia. The assessment was done using the guide to assess the age-friendliness of a health service developed by Age-Friendly Northeast Victoria, Australia.

**Results:** The assessment has four main domains; workforce, provision of health care, health system and environment. The results found out that the workforce and provision of health care domains were not age-friendly in both PMMPMHAB Hospital and Pekan Tutong Health Centre. However, the health system and environment domains showed a balance between age-friendly and not age-friendly in both healthcare facilities.

**Conclusion:** Therefore, a lot of actions and initiatives particularly focusing on workforce and provision of health care to older people need to be conducted in both PMMPMHAB Hospital and Pekan Tutong Health Centre in order to support age-friendly communities which have a substantial role in preventing or reducing risk of health problems associated with ageing including dementia.

### **Development, growth and role of dementia associations.**

#### **PP24. Alzheimer's Society of Maldives (ASM).**

**Mariyam Fiyaza, Ali Saleem.**

#### **Alzheimer's Society of Maldives.**

Alzheimer's Society of Maldives (ASM) is a non-profit Civil Society Organization (CSO) registered under Associations Act (ACT NO: 1/2003) of Maldives on September 4, 2019 and a family initiative. However, ASM's activities officially commenced in September 2021 due to the COVID-19 pandemic.

ASM's aim is to improve the quality of life for Maldivians and residents of Maldives who are affected by Alzheimer's disease and other forms of Dementias. ASM's objectives are to raise awareness about Alzheimer's disease and other Dementias, offer support services to persons with Alzheimer's disease and other Dementias and their Caregivers, advocate to make Alzheimer's disease and other Dementias a major health priority, and find means of better care through research initia-

tives.

In 2021 and 2022, ASM focused on creating awareness about Alzheimer's disease and other Dementias, including running an Awareness Campaign from July 2022 till November 2022. During these years, ASM also focused on strengthening connections and networking. In 2023, ASM established a support function, starting with the formation of a Support Group. ASM's future plans include expanding its Support Services function and establishing a Dementia Day Care and Information Centre, and introducing dementia-friendly products.

ASM joined the membership development program of Alzheimer's Disease International (ADI) in October 2021 and achieved full membership status in June 2023. ADI has been a crucial source of support for ASM since the beginning. During ADI's visit to the Maldives in November 2022, the Ministry of Health, Maldives committed to developing a National Dementia Plan.

ASM is a relatively new organisation with much to establish and with limited resources and expertise. However, ASM has made significant progress in its mission to support individuals with Alzheimer's disease and other dementias in the Maldives, and has worked diligently to become a reputable non-profit, non-government organisation within a short span of time.

### **Fundraising for dementia.**

#### **PP25. Fundraising proposals for development of dementia and palliative care services.**

**Sidharth Puri<sup>1,2</sup>, Suheera Amornmahaphun<sup>1,3</sup>, Sunjida Shahriah<sup>1,4</sup>, Suman Seshkar<sup>1</sup>, Somaye Pouy<sup>1,5</sup>, Hemdeep Kaur<sup>1</sup>, Shyh Poh Teo<sup>1,6-7</sup>, Shoon Mya Aye<sup>1</sup>, Sachin Dwivedi<sup>1,8</sup>, Risa Vernette N Sangma<sup>1</sup>, Harjot Singh<sup>1,9</sup>, Zannat Ara<sup>1</sup>.**

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<sup>9</sup>Department of Community Medicine, Sri Guru Ram Das University of Health Sciences, Sri Amritsar, Punjab, India.

Fundraising is essential to effectively develop dementia and palliative care services. As part of a Fellowship in Palliative Care, palliative fellows from Bangladesh, Brunei, India, Iran, Myanmar and Thailand brainstormed potential fundraising options in their locality. The fundraising proposals and their strengths and drawbacks are described. Possible fundraising plans included community-based fundraising through approaching community contacts, running charity shops, running lotteries at large festive celebrations or fairs, and applying for seed grants or funds through international organisations. Fundraising events such as art and photography exhibitions, Christmas bashes or carol singing competitions in colleges or institutions were suggested. There were several innovative ideas, such as a piggy bank project for school children, concurrent provision of services such as a shuttle buses and collecting donations, accessing tap on technology funding, and forming restaurant partnerships where recipients of dementia or palliative services dine in on set days, with sales proceeds contributed towards es-

sential services.

**Youth engagement.**

**PP26. Student-led Instagram posts for Demensia Brunei and impact measurement.**

Wardina Baharin<sup>1</sup>, Nurhazirah Norazlan<sup>1</sup>, DK Maziah Rosli<sup>1</sup>, Mu'min Karim<sup>1</sup>, Syahmina Sayang<sup>1</sup>, Amalena Nazwin<sup>1</sup>, Alif Rossidi<sup>1</sup>, Firdaus Sani<sup>1</sup>, Hasya Shahrin<sup>1</sup>, Lim Rui Shuan<sup>1</sup>, Shyh Poh Teo<sup>2,3</sup>.

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**Background:** 10 students from the Faculty of Arts and Social Sciences, Universiti Brunei Darussalam were attached to Demensia Brunei for 14 weeks from 11th of January to 17th of April 2023. Multiple tasks were given to the students to raise awareness regarding dementia to the public. This included designing infographics on dementia and creating posts on Demensia Brunei's Instagram account.

**Methods:** The 10 students took turns following a pre-made schedule to create their posts. The infographics provide a quick rundown on dementia that may be hard to explain using words alone. The students also made posts regarding the activities done throughout the attachment. The Insights tool within Instagram was used for impact measurement of the social media posts.

**Results:** A total of 33 posts were made with a great number of people reached. Between 1st February and 30th April 2023, 6,012 accounts were successfully reached, which was

an increase of 327% in reach compared to the previous 3 months. 5,134 reached were non-followers (of the Instagram account), an increase of 712%. Content reach was mainly from posts (3,588), reels (1,539) and story posts (687). Post interactions increased by 71%, consisting of 772 likes, 97 saves and 137 shares. Story interactions increased by 1,100%, cumulatively from the number of replies and shares. 92 and 27 interactions were from Reels and Video interactions respectively. The students had engagements from 374 accounts, an increase of 87% compared to the previous 3 months. There was also an increase in followers by 145, of which 70.3% were women.

**Conclusion:** Student-led Instagram posts can have significant impact in terms of reaching the community and engaging them with information about dementia.

#### **PP27. Community outreach programme with Demensia Brunei.**

**Wardina Baharin<sup>1</sup>, Nurhazirah Norazlan<sup>1</sup>, DK Maziah Rosli<sup>1</sup>, Mu'min Karim<sup>1</sup>, Syahmina Sayang<sup>1</sup>, Amalena Nazwin<sup>1</sup>, Alif Rossidi<sup>1</sup>, Firdaus Sani<sup>1</sup>, Hasya Shahrin<sup>1</sup>, Lim Rui Shuan<sup>1</sup>, Shyh Poh Teo<sup>2,3</sup>.**

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The Community Outreach Programme (COP) is an option given to 3rd year students of Universiti Brunei Darussalam (UBD) for their Discovery Year (DY), which is mandatory for graduation. The main objective of this programme is for students to have a chance to give back to the community by involving themselves with Government and Non-government agencies for a semester as vol-

unteers. The students allocated to Demensia Brunei to carry out their COP from January to April 2023 were from different majors, namely: Malay Literature, Geography, Sociology and Anthropology, History and English Studies. Despite the differences in backgrounds, the students were encouraged to work together by sharing and applying the knowledge they learnt from their courses to carry out tasks given to them while attached with Demensia Brunei. The tasks included clinical attachments, dementia health screening at multiple establishments, taking part in TV and radio interviews, carrying out walkability audits, writing articles, organising a fundraising event for the organisation and posting infographics which were expected to spread dementia awareness to the public. The COP with Demensia Brunei was beneficial in contributing to the growth of the students in many aspects, as they were able to learn and have access to in-depth information about a specific field, which was further strengthened by the practical tasks that the students were given. Valuable knowledge was gained that would not have been found solely by studying in classrooms.

#### **Dementia risk reduction: Risk Factors**

#### **PP28. Cognitive screening for dementia in dialysis centres in Brunei Darussalam.**

**Min Banyar Han<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

<sup>1</sup> Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.

<sup>2</sup> PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.

**Background:** Older people with chronic kidney disease are at high risk of developing cognitive impairment or dementia. Brunei has a high prevalence of chronic kidney disease. Cognitive screening was conducted nationwide in dialysis centres across Brunei to as-

sess the prevalence of cognitive symptoms and cognitive impairment among patients with end-stage renal disease.

**Methods:** This was a cross-sectional study of haemodialysis patients using cluster sampling of patients aged 50 years and older. A questionnaire on risk factors and symptoms of dementia, as well as the Mini-COG (3-item word Recall and Clock-Drawing Test) was administered to consenting participants.

**Results:** There were 206 participants, of whom 88 (43%) were male and 118 (57%) were female. Median age was 62 years. About two-third of participants had at least secondary education. The most common risk factors other than kidney disease were hypertension (84%), hypercholesterolaemia (56%) and diabetes mellitus (51%). The most common symptoms of cognitive impairment were misplacing things (45%), visuospatial difficulties (38%), memory loss (35%) and mood or behavioural changes (31%). Among the participants, 5% experienced worsening of symptoms and 6% admitted their symptoms affected activities of daily living. There were 42% of the participants who were unable to fully recall the 3-word items, while 45 (22%) could not complete the clock-drawing test correctly. Based on Mini-COG scoring, there were 17 (8.3%) respondents who had possible cognitive impairment.

**Conclusion:** Among haemodialysis patients aged 50 years and older, there was a high rate of risk factors for dementia and symptoms of possible cognitive impairment. Early recognition and screening for dementia should be considered in this high-risk population.

**PP29. Dementia screening in Cardiology Outpatient clinics in RIPAS Hospital, Brunei Darussalam.**

**Yee Hui Lim<sup>1</sup>, Norhayati Kassim<sup>2</sup>, Siti Munawwarah Md Tarif<sup>2</sup>, Asmah Husaini<sup>3</sup>, Muhammad Hanif Ahmad<sup>1</sup>, Nadzirah Rosli<sup>1</sup>, Jian Yu Lei<sup>1</sup>, Min Banyar Han<sup>1</sup>, Irnawati Mahir<sup>4</sup>, Maizatul Akmam Omar**

**Ali<sup>4</sup>, Nur Satri Hashim<sup>4</sup>, Nurul Bazilah Ali<sup>5</sup>, Shyh Poh Teo<sup>1,3</sup>.**

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**<sup>3</sup>PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**<sup>4</sup>Community Development Department, Ministry of Culture Youth and Sports, Brunei Darussalam.**

**<sup>5</sup> Occupational Therapy Unit, RIPAS Hospital, Brunei Darussalam**

**Background:** Dementia is underdiagnosed in Brunei and patients often present in later stages of the disease. Community screening of dementia in Brunei is a strategy for early detection of dementia. This allows early initiation of treatment, rehabilitation and control of risk factors for dementia risk reduction. A community survey was conducted in cardiology outpatients with the aim to screen and identify risk factors and symptoms of dementia.

**Methods:** This study was done for 2 weeks from 27 February 2023 to 11 March 2023. Convenience sampling was used to recruit participants at the Cardiology Outpatient clinic in RIPAS Hospital, Brunei. Older adults aged 60 years and above, or 50 years and above with non-communicable diseases and risk factors for dementia were enrolled and screened for dementia using a questionnaire regarding risk factors, symptoms of dementia and the Mini-COG, a cognitive screening tool.

**Results:** A total of 84 older adults met inclusion criteria. There were 6 older adults excluded due to difficulty reading or writing in English or Malay, while 2 older adults did not have time to complete the Mini-COG. There were 39 (46.4%) females, 42 (50%) males and 3 did not disclose their gender. The most common risk factors were hypertension (73%), hypercholesterolemia (59%) and



heart disease (51%). The most common warning signs or symptoms of dementia were misplacing things (54.7%), memory loss (42.8%) and mood and behaviour changes (29.7%). Based on the Mini Cog score, 9 (10.7%) older adults had suspected dementia.

**Conclusion:** The use of screening tools such as the Mini-COG may be implemented in outpatient settings to detect suspected dementia. The importance of early detection of possible dementia facilitates further workup and initiation of treatment. Risk factors for dementia, particularly hypertension and hypercholesterolemia should be better managed to reduce prevalence of dementia.

#### **Risk reduction and prevention.**

#### **PP30. Review of WW-FINGERS methodology for dementia risk reduction in Asian settings.**

**Shi Ying Tan<sup>1</sup>, Suprianto Bin Suryono<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

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<sup>2</sup>PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.

**Background:** Alzheimer's Disease (AD) is a global health challenge. The Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER) was a randomised controlled trial that showed multidomain lifestyle interventions could prevent or delay cognitive impairment in at-risk older people. Following its success, World-Wide FINGERS (WW-FINGERS) was launched, where countries adapted the fundamental methodology from FINGER into local settings. There is consideration in implementing a similar FINGER model for dementia risk reduction in Brunei Darussalam.

**Methods:** A literature review was conducted

on WW-FINGERS from Asian countries, namely Singapore, Malaysia, Philippines, Japan, South Korea, and China. The study setting, recruitment criteria, follow-up duration, intervention parameters, and outcome measures were compared.

**Results:** Most countries recruited participants in multiple centres, except Singapore and China which were single centred. The number of participants ranged from 70 (Singapore) to 2265 (China). The ages of recruited participants were limited to 60 or 65 years and above, while Malaysia, Japan, South Korea, and China excluded patients older than 80 years. The earliest follow-up in most settings was 6 months, except Singapore (3 months), and China (2 years). All of the studies incorporated nutrition, physical activities and risk factor reduction, with some minor variations in the interventions. There was some variability in outcome measures as well, with differing emphasis on cognitive assessment or neuropsychological status.

**Conclusion:** Each locality tailored the FINGER interventions to suit their local population, as there is no one model that fits all. Based on this review, it appears feasible to adapt the FINGER model for dementia risk reduction for at-risk older people in Brunei Darussalam.

#### **PP31. The impact of mental health on cognitive functioning.**

**Dyg Nurauni Hamizah Awg Mohamed Ali, Keen Lyn Yvonne Lee, Sheikh Hj Azimin Sheikh Hj Said.**

**Brunei Neuroscience Stroke and Rehabilitation Centre, Pantai Jerudong Specialist Centre, Brunei.**

**Background:** According to Lancet's Global Burden of Disease study in 2019, cases of dementia in Brunei are expected to increase by 2050. Cognitive deterioration is undoubtedly one of the most definitive presentations of dementia. While there are numerous studies on several risks related to dementia in-

cluding age, ethnicity, gender, and genetic factors, there has been limited research on the modifiable risk factors of dementia in Brunei Darussalam. Thus, the current investigation aims to identify mental illness history and depression score as a correlate to cognitive deterioration in the clinical population of Brunei Darussalam.

**Methods:** This is a cross-sectional study into clinical cases referred by the Brunei Neuroscience Stroke and Rehabilitation Centre to the Clinical Psychology Unit for formal cognitive testing in 2022. All cases were filtered and 117 cases were retained for further analysis (36% female and 64% male, age M = 57.6) as they were able to fully complete both the Montreal Cognitive Assessment (MoCA) together with a mood screener (Patient Health Questionnaire 9-item or Geriatric Depression Scale 15-item). A Pearson correlation analysis was conducted to investigate the relationship between history of mental illness, current depression score, and cognitive decline.

**Results:** Findings showed that having a past history of mental illness is positively correlated with performance in standardised cognitive assessments ( $R = 0.18$ ). Interestingly, there is inconclusive evidence of a relationship between subjectively reported depression score and cognitive performance at time of assessment.

**Conclusion:** While mental illness history explains some variability in cognitive performance, there is still much to be unaccounted for. This study emphasises the need to consider psychosocial interventions as a preventative measure of dementia at an early stage to achieve a good quality of ageing.

### **Dementia diagnosis, treatment, care and support: Diagnosis, diagnostic tools and cognitive assessments.**

#### **PP32. Forget Me Not: Case Report.**

**Caroline Shie Siaw Mei<sup>1</sup>, Dawn Antony<sup>1</sup>, Arun Kumar Gupta<sup>2</sup>.**

**<sup>1</sup> Department of Neurosurgery, Brunei Neuroscience, Stroke and Rehabilitation Centre, Brunei Darussalam.**

**<sup>2</sup> Department of Diagnostic Imaging, Jerudong Park Medical Centre, Brunei Darussalam.**

We present a 57-year-old male with a dural arteriovenous fistula in the posterior fossa causing dementia. We aim to demonstrate a rare but recognized cause for dementia that is treatable and reversible. He presented with occipital headaches associated with dizziness and sudden amnesia. On examination, he had an ataxic gait, horizontal nystagmus, and dysdiadochokinesia on the left side. A CT of his head revealed non-communicating hydrocephalus and features of raised intracranial pressure. A right medium-pressure ventriculoperitoneal shunt was performed. An MRI of his brain showed features suggestive of dural arteriovenous fistula in the posterior fossa, which was confirmed on digital subtraction angiography. This was subsequently embolized. He has recovered well, with remarkable improvement in all domains of his cognitive function.

### **PP33. Patient-centred health outcome measures for dementia in RIPAS Hospital, Brunei Darussalam.**

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**<sup>2</sup>PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** The provision of quality patient-centred medicine for dementia requires measurements of appropriate health outcomes, using a minimum data set to ensure standardisation of reporting and reducing heterogeneity in outcome measures used. This is necessary for comparing treatments in

terms of benefits, complications or side-effects, which has implications on overall treatment decision-making.

**Methods:** The Patient-Centred Health Outcome Measures for Dementia developed by the International Consortium for Health Outcomes Measurements (ICHOM) was reviewed to determine whether data collected in Geriatric Outpatient Clinics in RIPAS Hospital covered the ICHOM case-mix variables and outcome measures. Health outcome measures recommended by ICHOM but not collected were identified.

**Results:** Basic demographic information was routinely collected, except for body mass index, alcohol use and dementia staging. There were limited measures of neuropsychiatric issues, quality of life and wellbeing of patients with dementia and caregivers. Several recommended tools measuring Patient-Reported Outcome Measures (PROM) utilised were the Bristol Activity Daily Living Scale (BADLS), Neuropsychiatric Inventory (NPI) and Montreal Cognitive Assessment (MOCA). However, the Rowland Universal Dementia Assessment Scale (RUDAS) was used preferentially for patients with lower educational levels or those preferring shorter testing times. The Quality of Life-Alzheimer's Disease (QOL-AD), Quality of Well Being Scale-Self Administered (QWB-SA), EuroQoL-5D (EQ-5D), Veterans RAND 12(VR-12), Clinical Dementia Rating Dementia Staging Instrument (CDR) and Modified Self-Administered Comorbidity Questionnaire (SCQ) were not used.

**Conclusion:** Improving data on patient-centred health outcome measures facilitate shared decision-making and impact outcomes of patient's priorities in care, treatment and goal setting. Ensuring consistent documentation of specific measures, such as BMI, patient and caregiver's quality of life and wellbeing should be improved. Documenting alcohol use may be done only on a case-by-case basis due to cultural or religious factors in Brunei. Tools such as CDR and SCQ may be considered for documenting PROM.

**PP34. A case report on dementia and cerebral amyloid angiopathy (CAA).**

**Muhammad Ali Muhammad Ariffin<sup>1</sup>, Muhammad Hanif Ahmad<sup>1</sup>, Yusnida Yussof<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

**<sup>1</sup>Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**<sup>2</sup> PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

Cerebral amyloid angiopathy (CAA), a cerebrovascular disorder which is caused by the accumulation of amyloid-beta peptides in the cerebral cortical and leptomeningeal vessels. These vascular changes can lead to microhaemorrhages to lobar intracerebral haemorrhage. CAA becomes more prevalent as age increases. According to the autopsy studies, CAA tends to be associated with Alzheimer disease in most cases. Currently, there is no disease-modifying treatment available. Despite that, early identification can assist clinicians as guidance in the management with the utilisation of antiplatelet, anticoagulant, or thrombolytic drugs in patients with CAA. A case of a patient with cognitive impairment and suspected CAA is described.

**PP35. Prevalence and clinical profiles of mild cognitive impairment and dementia in Neuroscience Centre in Brunei Darussalam.**

**Khant Zaw, Ye Thwin, Jessie Colacion. Department of Neurology, Brunei Neuroscience Stroke & Rehabilitation Centre, Pantai Jerudong Specialist Centre.**

**Background:** Dementia, a leading cause of death and disability globally (WHO-2023), poses significant challenges as the elderly population continues to grow. To date, this is the first hospital-based study of the prevalence and clinical profiles of people with dementia in Brunei Darussalam.

**Methods:** This is a case-control study. Cogni-

tive assessment reports of the clinical neuropsychology registry were reviewed. Clinical information was collected from Bru-HIMS and analysed using Microsoft Excel. The objectives were to:

- (i) Determine the prevalence of mild cognitive impairment (MCI) and dementia among patients referred for cognitive assessment from 1st January 2022 to 31st December 2022.
- (ii) Describe demographic and clinical characteristics of the patients.
- (iii) Determine the types of dementia and treatment trends.

**Results:** Of 223 patients referred for cognitive assessment, 61 (27.3%) had cognitive impairment; 5.8% had MCI and 21.5% had dementia. Mean age was 67 years. Most were males (55.7%). Young onset dementia was noted in 19 patients (31.1%). Majority (86.9%) had concomitant risk factors; hypertension (80.3%), hyperlipidaemia (63.9%), diabetes mellitus (40.9%) and previous stroke (26.2%). The most common types of dementia were vascular dementia (26.2%), Alzheimer's disease and Parkinson's disease-related dementia (22.9% each), mixed-type dementia (4.9%) and (1.6%) Lewy body dementia. Most patients were on Donepezil (32.7%) followed by Memantine (11.4%) and Rivastigmine (6.5%). Nearly half of the patients (49.2%) were not on treatment.

**Conclusion:** The study highlights the significant prevalence of MCI and dementia among patients referred for cognitive assessment, comparable to other hospital-based epidemiological data. The most common type is vascular dementia, followed by Alzheimer's disease and Parkinson's disease-related dementia. A significant number of patients who were not on treatment. A prospective study is recommended to assess the prognosis of these patients.

**PP36. Evaluation of online Dementia Care Skills Workshop (Demensia Brunei and Alzheimer's Society of Maldives).**  
**Mariam Fiyaza<sup>1</sup>, Shyh Poh Teo<sup>2,3</sup>.**

<sup>1</sup>**Alzheimer's Society of Maldives, Maldives.**

<sup>2</sup>**Demensia Brunei, Brunei Darussalam.**

<sup>3</sup>**PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** An online dementia care skills workshop was jointly organised by Demensia Brunei and Alzheimer's Society of Maldives on 16th March 2023 for 2.5 hours. The workshop provided an overview of dementia, impact of dementia and person-centred care, effective communication, and behavioural and psychological symptoms of dementia.

**Methods:** At the end of the workshop, a QR code with the link to a Google Forms questionnaire was provided to the participants to complete. The questionnaire asked regarding their satisfaction with the session, relevance of the content, effectiveness of learning and which aspects required additional time or future sessions.

**Results:** There were 43 completed forms out of 68 participants (63.2% response) from the Maldives. There were 9 (20.9%) from health-related non-government organisations (Nurses Association, Community Nurse Volunteers, Alzheimer's Society of Maldives), 23 (53.5%) from hospitals or health centres, and 11 (25.6%) from the Ministry of Gender, Family and Social Services. There were 15 (34.9%) who rated the format and structure of the session as very good, while 27 (62.8%) rated this as excellent. There were 16 (37.2%) who rated the workshop as relevant and 25 (58.1%) rated this as very relevant for their needs. For the effectiveness of learning, there were 20 (46.5%) who rated 'very good' while 22 (51.2%) rated this as excellent. Areas that required more time, depth or detail or to be considered for future sessions included communication, risk factors and care management and caregiver burden.

**Conclusion:** The online dementia care skills workshop was well-received by the participants. Further educational sessions to im-

prove the knowledge and understanding of dementia care skills are warranted.

**PP37. Dementia education in higher education institutions in Brunei Darussalam.**

**Sanny Zi Lung Choo<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

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Dementia is a major cause of disability and dependence among older people. Dementia has a significant impact on the person, family members and societies as a whole. There is a need to increase the knowledge and training of various fields regarding dementia to improve readiness of countries to manage the condition. Thus, it is important to include dementia awareness in local higher education institutions; not just for the health sciences. We looked into the courses provided by the four main local higher education institutions and grouped the courses they provide into six different themes. Aspects of dementia relevant to each theme are listed. A sample curriculum was also laid out using architecture courses as an example. We hope this can be used as a guidance for local higher learning institutions to incorporate relevant aspects of dementia into their curriculum.

**PP38. Deconstructing dementia.**

**Qiu Hua Catherine Chan, Wai-Teng Debbie Lynn Siew, Anuja Satish Bhave, Yuan Ying Gan, Wan Ying Tan, Su Saw Lwin, Wenjun Gabriel Gerard Yee.**

**Bright Vision Community Hospital.**

Patients with dementia have high care needs when it pertains to managing their psychological and behavioural exigencies. Both pharmacological and non-pharmacological management of Behavioural and Psychological symptoms of Dementia (BPSD) play important roles. However, non-pharmacological

management focusing on Patient Centred Care (PCC) in dementia is often not optimised in clinical settings. There is a lack of PCC in the management of patients with dementia in our junior doctors' (Medical Officers and below). Traditionally, there is also lack of focus in this area for dementia care in medical school education and even if there is knowledge, application is limited especially when there are time constraints at work.

We decided to embark on an asynchronous training program integrating face to face role playing sessions. It was planned together with the end users in mind (junior doctors themselves) and their inputs.

The aim was to educate and boost the confidence of junior doctors on Person-Centred Care (PCC) in managing patients with BPSD. We harness Educational Technology tools such as Google Classroom, Padlet etc to encourage asynchronous learning at our own time with easy access via handphones.

Outcomes that will be collected (still at analysing stage at time of abstract) will be:

1. Change in knowledge and confidence level of junior doctors in utilising PCC in managing BPSD.
2. Feedbacks on:
  - Appropriateness and efficacy of the employed techniques of education using technology and role play sessions.
  - Relevance of the topic of PCC in dementia at the level of junior doctors.

**PP39. Training carers to look after a patient with a CSF diversion device.**

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Caregivers should be aware of the signs and symptoms that indicate shunt malfunction and seek immediate appointment with their designated clinician, if they occur. Shunt malfunction or infection can occur any time regardless of how long the shunt has been in place. In this poster we try to familiarise caretakers on the potential complications of ventriculoperitoneal shunts including the care of patients with a programmable shunt.

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### PP40. Recognising gaps in memory clinic referrals in Geriatric Medicine, RIPAS Hospital.

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**Background:** The Brunei population is rapidly ageing, with an increase in geriatric diseases like dementia. This leads to a corresponding increase in a demand for Geriatric clinics which can be accessed via referrals from other services. We audited the referrals to assess the adequacy of information and waiting times before review in the clinic.

**Methods:** Referrals for the Geriatrics Memory clinic in RIPAS Hospital, Brunei from September 2022 to March 2023 were reviewed retrospectively. Data collected included origin,

date, indication, documented clinical details such as risk factors, cognitive testing and the outcomes from the clinic reviews and the actual date for these reviews.

**Results:** There were 33 referrals, with 21 (63.6%) female and 12 (36.4%) male patients. Age range was 69-90 (median 79 years). Most referrals came from General Practice (13, 39.4%). The waiting time for review was found to be within 40 to 340 days (Mean 90, Median 66) 25 referrals were made due to symptoms of memory loss (75.7%). Notably, 12 (36.4%) of these referrals did not document symptom duration. In terms of documented functional status, this was done in 33.3% for mobility, 45.5% for ADLs and 18.2% for IADLs. Only 19 (57.6%) referrals documented relevant risk factors such as Diabetes Mellitus, Hypertension, Stroke. Information regarding orientation, cognitive tests and having previous imaging were only included in 15.6%, 15.6% and 21.2% of the referrals respectively. In addition, 28 referrals had unidentified safety risks, 11 (39.3%) of which were revealed to have safety issues upon review in the clinic.

**Conclusion:** Documentation of multiple aspects related to risk factors, functional status and safety issues may be improved as this information has implications on triaging the referrals. Clinicians may need to be informed regarding the required information for referrals to memory clinics.

### Telemedicine

### PP41. Emerging role of telemedicine in dementia care

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**Background:** Dementia affects more than 55 million patients worldwide with significant societal, economic and psychological impact on the patients and their family members. The prevalence of dementia is expected to grow continuously due to the increase in life expectancy and ageing population. Many patients with Alzheimer's disease and related dementias have limited access to effective and individualised treatment. The COVID-19 pandemic accelerated telemedicine use, which holds potential for addressing this gap.

**Methods:** An assessment of the Telemedicine Clinic in Geriatric Unit in RIPAS Hospital, Brunei Darussalam was performed. The Telemedicine clinic was started during the COVID-19 pandemic in 2021 using the communication platform Zoom. Retrospective review of electronic clinical records for June 2023 was done. Subsequent follow-up preference was asked.

**Results:** Out of the 46 patients, 41 (89%) of them have dementia. 34 (83%) of them are advanced and bed bound. 12 (29%) of them have behavioural and psychological symptoms in dementia. Telemedicine is well received among patients and care partners, all of them prefer to be followed up virtually. All of them received individualised care from the doctor, nurse and/or other allied health professionals. Two of the consultations had to be changed from zoom system to WhatsApp video call due to technical difficulties.

**Conclusion:** Telemedicine is beneficial for patients in advanced stages of dementia with limited mobility or accessibility issues, due to being bedridden, living in remote areas or refusal to attend clinic due to behavioural symptoms. Telemedicine is a valuable tool in diagnosing patients, monitoring progress with treatment and providing caregiver support. It enables increased access to specialised healthcare and allows for a multidisciplinary treatment approach to improve personalised care. However, successful delivery requires support staff and the carers to navigate technologies, as interrupted or delayed internet

connections may cause difficulties.

#### **Treatment and dementia.**

#### **PP42. Outcomes of patients with cognitive impairment/dementia admitted with hip fractures in Brunei.**

**Muhammad Hanif Ahmad, Yusnida Yussof, Tan Chia Wei.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**Background:** Elderly patients with dementia and hip fractures are associated with high levels of morbidity and mortality as well as financial and human cost to the healthcare system, to patients and to caregivers. Factors contributing include increasing age and multimorbidities. In Brunei Darussalam, there is insufficient data on our current population. By identifying prevalence of cognitive impairment/dementia with acute hip fractures can provide insight in preventing adverse outcomes such as streamlining care of osteoporosis to prevent future fractures.

**Methods:** Retrospective analysis on patients over the age of 60 from 2020 and 2022. Data was extracted from the electronic online medical records (Bru-HIMS). Data from 2021 was excluded in view of resources in the hospital being re-distributed to manage the COVID-19 pandemic. Duplicate records, incorrect coding of hip fractures and high impacted fractures such as from road traffic accidents were excluded. Demographic representation, cognitive impairment/dementia, length of stay, time to operating theatres (OT) as well as functional via clinical frailty scale (CFS) and mortality outcomes were collected.

**Results:** Based on the data collection, among 133 patients in 2020 and 2022, 26 patients with cognitive impairment/dementia have significant reduction in functional status from their pre-morbid with average CFS score of 7 on discharge with the average time to OT

from admission day of 10 days and average length of stay between 14 days. However, only 8 deaths occurred within 180 days.

**Discussion:** Patients with cognitive impairment including dementia were older, longer associated length of stay in hospital and poor functional outcomes post-hip fracture.

#### **PP43. Delirium screening in orthogeriatric patients using 4AT tool in RIPAS Hospital.**

**Zin Mar Tun, Chia Wei Tan.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

**Background:** To screen for delirium among hospitalised older patients with hip fractures in the orthopaedic unit, RIPAS hospital.

**Methods:** Retrospective delirium screening using 4AT tool and standardised orthogeriatric template was performed in patients  $\geq 65$  years with hip fracture on admission and post-operatively over a period of 3 years 2020, 2022, and 2023.

**Results:** 4AT completion rates were 16.6 % on admission and 7.5 % post operatively in 2020, 2.6% on admission and 2.6 % post operatively in 2022, 69% on admission and 58 % post operatively in 2023. 4AT scores indicating delirium were present 18.5% on admission in 2020, 6.5 % on admission and 5.5 % in post-operative patients in 2022, and 18.9% on admission and 16.1 % in post-operative patients in 2023.

**Conclusion:** There was an improvement in delirium screening in 2023 after the introduction of a standardised orthogeriatric template. It is recommended that the 4AT tool and orthogeriatrics template is used in older patients with hip fractures admitted to the orthopaedic unit to ensure consistent assessment and delirium screening.

#### **PP44. Case reports of adverse drug reactions from Acetylcholinesterase inhibitors (Donepezil, Rivastigmine) for treat-**

**ment of Alzheimer's dementia.**

**Min Banyar Han<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

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**<sup>2</sup>PAPRSB Institute of Health Sciences, Universiti Brunei Darussalam, Brunei Darussalam.**

**Background:** An adverse drug reaction (ADR) is an unwanted or harmful reaction that is experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug. Acetylcholinesterase inhibitors (AChEI) are medications that block the action of the enzyme acetylcholinesterase, which breaks down the neurotransmitter acetylcholine.

#### **Case 1:**

A 91-year-old lady was admitted for symptomatic hypotension and transferred to the Coronary Care Unit (CCU), as her ECG findings were consistent with Sick Sinus Syndrome. She has hypertension, dyslipidaemia and vascular dementia with neuropsychiatric complications. She was previously seen in Geriatric Outpatient clinic for dementia and was initiated with Donepezil. However, the patient had stopped taking Donepezil after 2 days of initiation as she developed chest discomfort and dizziness, which in retrospect may be due to her cardiac conduction abnormality.

#### **Case 2:**

A 74-year-old lady was admitted with delirium with behavioural changes. She had hypertension, diabetes mellitus, hyperlipidaemia and Parkinson's disease with Dementia. Two weeks prior to admission, an antipsychotic (quetiapine) was started for behavioural changes. During the admission, quetiapine was withheld and rivastigmine was started. She developed bradycardia and hypotension 6 hours after administration of rivastigmine. Subsequently she was transferred to CCU and temporary pacing was inserted.

**Conclusion:** Cardiovascular adverse effects



of AChEI are relatively infrequent. In order to avoid or minimise the risk, it is important to evaluate cardiovascular status including drug chart and ECG. When a person is initiated on new medications, counselling and education regarding potential ADRs is crucial. When an ADR occurs, the attributed drugs need to be discontinued and the person should seek medical attention in case of serious reactions. It is also essential for healthcare providers to report suspected ADRs to the National Adverse Drug Reaction Monitoring Center for further evaluation.

**PP45. COVID-19, pneumococcal and influenza vaccinations among Geriatric patients with dementia**

**Min Banyar Han<sup>1</sup>, Aung Ye Kyaw<sup>1</sup>, Shyh Poh Teo<sup>1,2</sup>.**

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**Background:** Older people with dementia are vulnerable to complications of respiratory infections. Therefore, vaccination against those infections especially Covid-19, pneumococcal and influenza is vital to prevent serious complications.

**Method:** This was a retrospective review of the electronic records of patients attending geriatric outpatient clinics in RIPAS Hospital from 1st August 2022 to 31st August 2022. Demographic information including age, gender, mobility, vaccination status (including Covid-19, pneumococcal and influenza) status were collected. It was also assessed whether patients were advised to receive vaccines according to local guidelines during the clinical consultation.

**Result:** There were 49 patients with a median age of 82 (range 70-102) years. There were 20 (40.8%) males and 29 (59.2%) females. The majority 34.6% were mobilising independently or 40.8% used a stick or

frame, 20.4% were limited to wheelchairs and 8.3% were immobile. Among those who received Covid-19 vaccines, 44.9% had two doses, 49% had 3 doses and 4% received four doses. One patient was unvaccinated. There were 61.2% patients who should have been recommended an additional Covid-19 vaccine dose as they were aged 80 years or older; while among younger age groups, a further 36.7% patients should consider an additional booster dose due to comorbidities. Only 4 (8.3%) out of the 48 patients were counselled regarding this. In terms of other vaccinations, only one patient received a pneumococcal vaccine in 2019, while only 9 (18.4%) patients have ever received an influenza vaccine. There were no patients who received annual influenza vaccines, while only one clinic patient was counselled to get it.

**Conclusion:** There is a need to improve the uptake of booster doses of Covid-19 vaccines, pneumococcal and influenza vaccines in older people especially with dementia to reduce both mortality and morbidity.

**PP46. Prevention and treatment of pressure injuries in patients with advanced dementia.**

**Misli Kula.**

**Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

A pressure injury is a localised injury to skin or underlying tissue, usually over a bony prominence, as a result of pressure, or pressure in combination with shear. Common places for pressure injuries are where bone is close to skin, such as over hip bones, tailbone, heels, ankles, and elbows. Pressure injuries occur most frequently in older adults because their skin is thinner and heals more slowly. A pressure injury audit among medical inpatients in RIPAS Hospital in 2015 using the Braden scale for screening found that among 279 patients, only 142 had pressure injury assessments done. Among these pa-

tients, 29 (20.4%) had pressure injuries. Preventive measures include repositioning bed-bound patients at least every 2 hours, preferably with a written repositioning schedule or turning chart. Use pillows to keep bony prominences such as knees and ankles from direct contact with each other. Skin care and early treatment include daily skin inspection, looking for any abnormalities, assessing and treating incontinence, cleansing skin at time of soiling, and using moisturiser creams for dry skin. Apply support surfaces, including pressure-reducing mattresses, heel pads or wheelchair cushions where required. If wounds develop, clean and dress the wounds appropriately, using proper solutions and dressings. Necrotic wounds must be debrided using chemical debridement e.g., intrasite gel or manuka honey, while sharp debridement at the bedside may be required for large areas of slough or necrosis. Dressing changes must be done whenever the dressing is soiled. Pressure injury management is not a simple process; thus, prevention is important. Interventions such as mobilisation, positioning, repositioning, and support surfaces are utilised in conjunction with other wound management approaches. In this review, prevention and management of pressure injuries will be described.

## **Rehabilitation**

**PP47. Development of an AI-driven scalable and low-cost home-based physical exercise and monitoring system for patients with musculoskeletal conditions: Opportunity for innovation in lowering cognitive decline in people at risk of dementia.**

**Asmah Husaini<sup>1</sup>, Nurul Zatil Hidayah Pg Hj Suffian<sup>2</sup>, Owais Ahmed Malik<sup>3</sup>, Wee Hong Ong<sup>3</sup>.**

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Cognitive decline in individuals with dementia or those at a heightened risk of dementia can be mitigated through comprehensive physical rehabilitation. Tailored physical exercises can be customised to the specific needs of each person. Consistent engagement in these exercises can help sustain and improve the overall physical and cognitive functions of individuals with dementia or those at risk, contributing to a longer maintenance of their quality of life. However, motivating elderly individuals, especially those with a higher susceptibility to dementia, to engage in physical activity is complicated due to established routines and a lack of communal encouragement and motivation. Emerging technological advancements are actively being developed to forecast and manage neurodegenerative disorders. Our team is committed to crafting an AI-driven, cost-effective, and scalable remote physiotherapy and rehabilitation system. This system will be capable of assessing and monitoring patients' adherence to exercise plans and tracking their progress. The integration of this AI system to encourage physical activity could significantly enhance the availability of exercise programs established by the hospital's physiotherapy team, effectively addressing both physical and psychosocial obstacles. Through the implementation of an AI monitoring system, individuals either already experiencing dementia or at an elevated risk of developing it will be empowered to receive the essential guidance and support while enjoying the comfort and convenience of their own residences.

## **End-of-life and palliative care.**

**PP48. Starting and establishing palliative care services for dementia, obstacles and how to overcome them: Collective shared experiences from a palliative fel-**

lowship.

**Sucheera Amornmahaphun<sup>1,2</sup>, Sunjida Shahriah<sup>1,3</sup>, Suman Seshkar<sup>1</sup>, Somaye Pouy<sup>1,4</sup>, Sidharth Puri<sup>1,5</sup>, Hemdeep Kaur<sup>1,7</sup>, Shyh Poh Teo<sup>1,6-7</sup>, Shoon Mya Aye<sup>1</sup>, Sachin Dwivedi<sup>1,8</sup>, Risa Vernetta N Sangma<sup>1</sup>, Harjot Singh<sup>1,9</sup>, Zannat Ara<sup>1</sup>.**

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**<sup>9</sup> Department of Community Medicine, Sri Guru Ram Das University of Health Sciences, Sri Amritsar, Punjab, India.**

Palliative care provides symptom relief and helps a person manage physical and mental stress of living with a serious disease. Palliative care is associated with a better quality of life, reduced caregiver burden and decreased healthcare costs. Dementia is a disease affecting physical and cognitive function, with significant psychological, social and financial burden. Palliative care is a basic essential service for people with dementia, yet it is often difficult to start or establish the service in various settings. Several practical approaches are suggested; this includes sensitisation programmes for medical and nursing students, allied health and hospital staff in teaching hospitals, community volunteer training, de-

veloping nurse-led palliative clinics, establishing telemedicine clinics and home-based care for palliative care, as well as piloting palliative care in areas of need, such as medical wards or intensive care units. Hope cafes can be set up in strategic locations, which are dedicated spaces within communities to share resources and find support. Bereavement services in the community are essential, as support is required more than ever by family members in grief. Policies and guidelines for palliative care, as well as palliative care research help improve the quality of palliative care provided. It is likely that there will be obstacles experienced during the set-up phase with practical solutions provided to overcome these barriers and challenges.

**PP49. Proposed interventions to improve palliative care services in formal health care and informal carer systems in UAE.**

**Sanchia Dilna Vaz<sup>1,2</sup>, Fazle Noor Biswas<sup>1,3</sup>, Angeline Pei Ling Koay<sup>1,4</sup>, Julian Hassan Amhed Suleiman<sup>1</sup>, Maha Ali Kassem<sup>1,5</sup>, Mousumi Aktar<sup>1</sup>, Rasha Mohammed Elzain Ali Mustafa<sup>1,6</sup>, Sia Tamba<sup>1</sup>, Samreen Khan<sup>1</sup>, Vinka Imelda<sup>1,7</sup>, Maureen Lukman<sup>1,8</sup>, Shyh Poh Teo<sup>1,9-10</sup>.**

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Palliative care is an essential service for caregivers and people living with dementia. Unfortunately, palliative care is not easily accessible globally, thus efforts are required to introduce these services globally. As part of a Fellowship in Palliative Care, a team of palliative fellows from multiple localities (Bangladesh, India, Indonesia, Lebanon, Malaysia, Pakistan, Philippines, Saudi Arabia, Sierra Leone and UAE) were required to suggest an action plan to assist a team member to improve palliative care services in their country. It was crucial to consider realistic interventions to improve care in both formal healthcare and informal care systems. UAE was nominated as the location, as there were only two hospitals offering palliative care, with minimal numbers of trained palliative specialists and a non-existence of community-based or home-based palliative care. For the formal health sector, multi-professionals ranging from doctors, nurses, physiotherapists, psychologists, pharmacists to communication specialists, lawyers and media personnel should be trained in palliative care. This team should advocate for palliative to multiple relevant sectors including Ministry of Health and pharmaceutical companies. For community support systems, a small initiative focusing on home care and a needs assessment is required. Awareness campaigns should be organised to raise awareness of palliative care, recruit volunteers and raise funds. Partnerships with community organisations, faith-based groups and other stakeholders in addition to healthcare providers are essential to develop. Finally, personal support systems are required, in the form of peer support groups, death cafes to allow people to talk about death and respite care for caregivers to refresh their physical and mental health. Although there is much to be

done to develop palliative care in the UAE, initial steps need to be taken, with intervention covering all three areas, namely healthcare, caregiver support and communities.

**PP50. Enhancing local and global palliative care: A two-year plan after a Fellowship in Palliative Care programme.**

**Fazle Noor Biswas<sup>1,2</sup>, Sanchia Dilna Vaz<sup>1,3</sup>, Angeline Pei Ling Koay<sup>1,4</sup>, Julian Hassan Amhed Suleiman<sup>1</sup>, Maha Ali Kassem<sup>1,5</sup>, Mousumi Aktar<sup>1</sup>, Rasha Mohammed Elzain Ali Mustafa<sup>1,6</sup>, Sia Tamba<sup>1</sup>, Samreen Khan<sup>1</sup>, Vinka Imelda<sup>1,7</sup>, Maureen Lukman<sup>1,8</sup>, Shyh Poh Teo<sup>1,9-10</sup>.**

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Palliative care is an essential service for caregivers and people living with dementia. Unfortunately, palliative care is not easily accessible globally, thus efforts are required to introduce these services globally. The Fellowship in Palliative Care programme is run as a six-month distance education programme by

the Institute of Palliative Medicine India, partnered with the Sanjeevan Palliative Care Project, Pondicherry, India, St Christopher's Hospice, London, United Kingdom and Bangabandhu Sheikh Mujib Medical University, Bangladesh. It aims to deliver effective, affordable and quality palliative care training, focused on low- and middle-income countries. As a group completing the fellowship this year, we reflected on how the team could continue collaboration to enhance both local and global palliative care. Four initiatives were proposed to run through a time frame of two years. Firstly, a death café project in a hospital will be run once a month to improve awareness of death, dying and end-of-life care. Once this has been set up, a similar format can be implemented in other settings. Secondly, improving awareness in each locality through organising talks or workshops; given the lack of palliative specialists globally, online guest speakers will consist of invited experts from the fellowship. Thirdly, as the fellows are from different countries, a two-monthly online peer support group will be started to provide emotional and practical support through sharing of experiences, feelings, information and resources. This should improve the ability of self-care skills and reduce burnout risk. Finally, there is work undertaken to develop a basic palliative care training curriculum for pharmacists in Bangladesh. Once this has been initiated, it may be piloted in other countries to improve pharmacists' ability to contribute to palliative care services.

### **Behavioural and psychological symptoms of dementia.**

#### **PP51. Experiences and Challenges in Managing Behavioural and Psychological Symptoms of Dementia in hospital setting in Brunei.**

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**<sup>1</sup>Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, Brunei Darussalam.**

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Behavioural and Psychological Symptoms of Dementia (BPSD) occur in most patients with dementia especially in advanced stages and can be challenging to manage in hospital settings. Tailored and combination treatment plans through pharmaco-psycho-social-spiritual approaches blending with cultural and religious beliefs are pivotal in the successful treatment of patients with BPSD. Two case reports detailing the individualised methodologies being implemented in managing BPSD as inpatients in Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital in Brunei Darussalam.

### **Well-being and quality of life.**

#### **PP52. The role of occupational therapists in dementia care in Brunei Darussalam.**

**Reisydah Binte Haji Abdul Hamid, Nurul Bazilah Haji Ali.**

**Occupational Therapy Unit, RIPAS Hospital, Brunei Darussalam.**

Difficulties in managing activities of daily living (ADLs) as a result of deteriorating function is a well-documented struggle that persons with dementia (PWDs) and their families face. Occupational Therapists (OTs) therefore play a pivotal role in helping these individuals navigate this distinct challenge as the disease progresses throughout their lifetime.

Comprehensive assessments looking into overall function including ADLs as well as cognitive ability are first completed in order to determine the appropriate intervention best suited for the PWD.

In early stages of dementia, OTs focus on preserving patients' independence and functional abilities by emphasising their in-

volvement in managing ADLs. Engagement in cognitive exercises as well as hobbies are advised to slow cognitive decline and enhance quality of life.

As dementia progresses to moderate severity, OTs adapt their interventions to address emerging deficits in the patient's function. Compensatory strategies such as simplifying tasks and establishing routines are adopted to provide a sense of security. Dementia-friendly spaces are advocated to prevent accidents and manage behavioural symptoms. Additionally, families are taught ways to effectively communicate with patients.

In cases of advanced dementia, comfort-oriented care is prioritised as patients become more dependent and are often bedbound. Caregiver training is provided to ensure that delivery of care is optimum and safe for both patients and the caregivers; appointed caregivers and family are educated and trained on proper manual handling techniques of PWDs during ADLs care or for pressure sore prevention. OTs may also recommend equipment to ease facilitation of care as moving PWDs will become increasingly difficult as the disease progresses, for instance the use of a hospital bed to help assume safe feeding position.

With the rising number of dementia-related cases in Brunei Darussalam, OTs remain indispensable in the development of long-term dementia care to ensure the wellbeing and dignity of PWDs and their families.

### **Support for dementia carers: Informal carer support.**

#### **PP53. Overview of dementia support and training services for carers in Brunei Darussalam.**

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#### **<sup>2</sup> Medical Social Worker Department, RIPAS Hospital, Brunei Darussalam.**

The World Health Organisation's 'Global action plan on the public health response to dementia 2017-2025' identified support for dementia carers as one of the seven action areas for member states to dampen the impact of dementia on communities and ensure the needs of individuals living with dementia and their carers are met. Currently support and training programmes for carers and families of people with dementia do exist locally in Brunei Darussalam.

Occupational Therapists provide carers with education, training, recommendations on care and equipment based on dementia severity in inpatient settings. If a suitable carer is unavailable or acquisition of necessary equipment is outside their means, a medical social worker is involved. Those with complex social issues may require ongoing input from welfare services from the Department of Community Development (Jabatan Pembangunan Masyarakat, JAPEM).

Individuals with dementia may apply for Disability Allowance (\$250 monthly) and those aged 60 and above will also receive an Old Age Pension (\$250 monthly). Full time family carers may also apply for Caregiver Allowances (\$250 monthly). These allowances are overseen by JAPEM. 'Sistem Kebajikan Negara' is an online platform where individuals can register and apply for welfare assistance from JAPEM. If they are of Muslim faith, they may also apply for funding support and housing through the Brunei Islamic Religious Council (Majlis Ugama Islam Brunei, MUIB), which receive contributions from Zakat (Muslim tithe).

In the community, carers may seek further training from Demensia Brunei, a non-governmental organisation conducting workshops on dementia care skills. Carers may seek additional help from private home care services.

The available services in Brunei are

primarily concerned with carer training and education, and financial and welfare assistance. More could be done to provide a wider range of services, including psycho-social support, respite services and information or advice on legal rights.

**PP54. The rationale behind the need to review existing local support for dementia carers.**

**Reisydah Binte Haji Abdul Hamid<sup>1</sup>,  
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'Support for dementia carers' has been identified as one of the action areas in the 'Global action plan on the public health response to dementia 2017-2025' endorsed by the World Health Assembly in 2017. The reality in Brunei Darussalam is that the bulk of dementia care is undertaken by informal carers, predominantly family members and occasionally friends of those living with dementia in the community, and the care and support provided is typically unpaid.

Caregiving can be challenging, especially in the case of dementia where care needs are greater and far more complex than other recipients of long-term care. Carers often are still looking after other family members such as their children and grandchildren. They may be facing practical issues such as financial constraints or inadequate accommodation. Some carers, especially older carers, have other health and mobility issues that require monitoring. These stressors cause significant strain on informal carers, impacting both their physical and mental well-being and ultimately affecting delivery of care.

The needs and wellbeing of carers may be impacted further by changing population demographics. Old-age dependency is expected to rise as the ratio of people at working-age to older persons throughout Asia

continues to decrease and the number of older persons will triple over the next few decades, propelled by falling fertility and mortality rates. This will inevitably decrease the availability of informal caregivers in the future which poses the risk of caregiver burnout and consequently impact the quality of care provided.

Therefore, it is crucial to review what services are currently available locally to determine what can be done to ensure the needs and well-being of carers of those living with dementia are supported and to dampen the impact that the dwindling number of informal caregivers will have on the provision of care in the future.

**PP55. Caregiver burden among caregivers of elderly patients and its associated factors: Literature review.**

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**Background:** Ageing population is a global phenomenon and has led to an increase in demand for informal caregivers. The aim of this literature review is to identify current evidence of caregiver burden among caregivers of elderly patients looking into its prevalence and its associated factors.

**Methods:** Literature search was done on PubMed with the search terms 'caregiver burden', 'elderly' and 'geriatric' with filters applied. The search retrieved 577 results and 10 articles were included after title, abstract and full text reviews with 1 additional local study included.

**Results:** This review showed that prevalence of caregiver burden ranges from 19% to 74% in studies who presented prevalence data. Five studies reported their findings in the form of mean or average scores which range from 17.9 to 65.9. It also revealed that dependence levels of care recipients have significant association with caregiver burden. Other socio-demographic and socio-economic

factors including age, gender, education and income levels also affected levels of caregiver burden.

**Conclusion:** Caregiver burden is an issue of increasing concern in the setting where the population is ageing and there is an increasing number of people with chronic diseases.

### **Information systems for dementia: Global dementia observatory.**

#### **PP56. World Health Organisation Global Dementia Observatory (GDO) Indicators for Brunei Darussalam.**

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**Background:** The World Health Organisation (WHO) Global Dementia Observatory (GDO) provides a conceptual framework and indicators for the Global Action Plan on the Public Health Response to Dementia 2017-2025. It is a useful tool to assist WHO member states to collect relevant national-relevant data to monitor progress, outlining three domains with multiple subdomains across seven strategic themes.

**Methods:** The WHO GDO Reference Guide Version 1.1 2018 was reviewed and information provided regarding the 3 domains (policy, service delivery, information and research) and indicators (1-19 only). Information regarding the other indicators related to epidemiology and impact as well as risk factors were not provided, as these details would be generated by WHO separately. The current status of the indicators in Brunei are outlined to the best of the author's knowledge.

**Results:** For domain 1 (policy), there is work in progress in terms of plans and standards of

care or care coordination. Community based health and social services are available, but there is a need to increase the breadth of services provided. Dementia friendly initiatives to improve accessibility of the physical and social environment are underway, with ongoing dementia education and training of non-health professionals. While dementia monitoring is feasible given the use of national electronic health records in Brunei, a research agenda, including participation of people with dementia needs to be developed.

**Conclusion:** Several areas to work on towards achieving the targets laid out in the WHO Global Action Plan on the Public Health Response to dementia 2017-2025 were identified through the WHO GDO indicators for Brunei Darussalam.

### **Dementia research and innovation: Epidemiology.**

#### **PP57. Dementia and the top 10 causes of death in ASEAN countries, 19 years apart (2000-2019).**

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**Background:** The leading causes of death in different countries vary. As the years pass, dementia is one of the notable leading causes of death especially in more developed countries. In ASEAN countries, there has been a significant shift in causes of death over time.

**Methods:** The WHO website for the top ten causes of death in the ASEAN countries were reviewed for the years 2000 and 2019 respectively.

**Results:** The WHO data revealed that dementia was not a leading cause of death in Brunei in 2000. However, in 2019, it was one



of the top five leading causes of death. There were three other countries in ASEAN with dementia as one of its leading causes of death in 2019; namely, Malaysia (top 10), Thailand (top 6) and Vietnam (top 6).

**Conclusion:** Dementia is rapidly becoming one of the foremost causes of death in the ASEAN region. A greater awareness in its diagnosis and management should be implemented in the healthcare setting and in the community, as it may be associated with earlier mortality.

### **Innovation, entrepreneurship and technology.**

#### **PP58. Validity and reliability of Thai computerised screening tool for mild cognitive impairment (MCI) and early dementia.**

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**Background:** Thailand has become an ageing society and there are limited dementia screening resources. The computerised Thai mental state examination (cTMSE) previously has been developed as a self-touch screen tool for the elderly population to early access treatment. This study aims to measure validity and reliability of this tool.

**Methods:** The participants consisted of 2 groups; 1) a group of fifty healthy aged caregivers 2) a group of fifteen mild cognitive impairment and forty-seven early demented patients without delirium or depressive disorder. Both groups were diagnosed firstly by

clinicians with a DSM IV-TR criteria, a Clinical Dementia Rating scale and the Thai Geriatric Depression scale as a gold standard and secondly, they also use a self-test cTMSE which was not included the repeat sentence and drawing tests. The retest process was conducted again within two months. The data from both groups were then comparatively analysed.

**Results:** The demographic data between patients and the control group was not statistically significant as shown respectively 1) on the gender basis males accounted for 50% while females 56% of the total population 2) 56.54% and 80% aged between 60-74 3) 41.94% and 54% was the retired government officer 4) 59.7% and 90% was in marital status 5) 41.94% of primary school and 32% of bachelor degree graduation 6) 96.77% and 96% living with family. The patients' group tended to show a statistically significant in higher number of underlying diseases and psychiatric disorders. For validity analysis, this study used a cut-off point of 18.5 which had a value of sensitivity of 24.2%, specificity of 98.0% and positive predictive of 70.2%. The reliability was demonstrated by an Intraclass correlation of 0.588 and Cronbach's alpha coefficient of 0.74. Test and retest result shows no statistically significant.

**Conclusion:** The cTMSE has a good reliability value. However, the validity showed high specificity but low sensitivity which indicated that the tool is still not the best-fit choice for a screening but it is suitable to be a diagnostic tool.

#### **PP59. Assistive technologies to support dementia care: A literature review.**

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**Department of Internal Medicine, Raja Isteri Pengiran Anak Saleha Hospital, Ministry of Health, Brunei Darussalam.**

**Background:** There is an unprecedented growth in the numbers of the ageing popula-

tion throughout the world, particularly in growing economies in the Asia-Pacific with economic expenditure costs of elderly healthcare estimated to be 200 billion Euros. Furthermore, there are a limited number of informal and professional health caregivers available to support this rapidly growing population. Fortunately, there are increasing numbers of published research about utilising these new assistive technologies and robotics towards dementia care in order to reduce the caregiver burden.

**Aim:** To explore the available assistive technologies in the literature that are available and in development as well as challenges encountered.

**Methods:** Searches for keywords in Google Scholar, PubMed and UpToDate were done for assistive technologies in dementia care particularly towards systematic reviews and meta-analyses. Articles reviewing adaptive technologies or artificial intelligence were also included.

**Findings:** A total of 29 relevant articles were selected out of 260 reviewed. Out of these articles, 17 elaborated about assistive technologies, 4 illustrated home care robots, 4 delineated supportive e-Health technologies, 4 described monitoring technologies. The utility of these technologies includes providing companionship, cognitive and psychoeducational exercises, early alerting and tracking systems for dementia patients as well as caregivers. Qualitative and quantitative studies describe benefits in terms of monitoring and security, sustaining social connections, psychosocial interventions for patients with dementia and caregivers. Currently the benefits measured are mostly not statistically significant, likely due to the limitations and ethical challenges in designing tailor-made technologies for each individual.

**Conclusion:** It appears inevitable that the adoption of new adaptive technologies for dementia care will be increasing in the future to bridge the deficit in providing adequate care for the rapidly ageing population. Fur-

ther reviews and updates will be of high interest to many stakeholders and caregivers around the world.

### **International collaborations, challenges and opportunities.**

#### **PP60. ASEAN Centre for Active ageing and Innovation (ACAI).**

**Shyh Poh Teo<sup>1,2</sup>, on behalf of the ACAI.**

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The ASEAN Centre for Active Ageing and Innovation (ACAI) is an ASEAN centre to enhance the quality of life and ageing and prepare ASEAN to be ready for the ageing society in the future. This was a deliverable of Thailand's ASEAN Chairmanship under the theme of 'Advancing Partnership for Sustainability'. The missions of ACAI include: serve as a knowledge centre on active ageing and innovation, support evidence-informed policies, strategies and guidelines on active ageing, implement capacity development programmes in support of active ageing, conduct research and development and innovation which support active ageing, and support the monitoring of progress of active ageing in ASEAN.

In April 2018, the plan to establish the ACAI was welcomed at the 30<sup>th</sup> ASEAN Summit Meeting in Manila, Philippines. The ACAI Agreement was endorsed at the 14<sup>th</sup> ASEAN SOMHD Meeting in Siem Reap, Cambodia in April 2019, and the Agreement of Establishment signed by all 10 members in May 2020. The permanent ACAI office is under construction and will be located on the 3<sup>rd</sup> floor of the Institute of Geriatric Medicine Building, Department of Medical Services, Ministry of Public Health in Thailand. The management mechanisms and funding ar-

rangements of the ACAI are described.

### **Non-pharmacological interventions.**

#### **PP61. The effectiveness of self-management program on people with dementia in the community.**

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**Background:** Self-management is an important factor in controlling chronic diseases. People with dementia can survive an average of 11-12 years after diagnosis, which is a chronic disease. The health of people with dementia can be improved through self-management. However, there is a lack of evaluation of the effectiveness of self-management programs for people with dementia.

**Methods:** The research team developed a self-management program specially designed for people with dementia after 6 expert meetings and 2 group trials. The content of the program includes a total of 15 times, including "cultivating healthy living habits", "improving self-efficacy", "reducing the impact of disease progression on daily life", "community connection", "family interaction and communication", and "advance care planning". Once a week, 2 hours each time. The single-group pre- and post-tests design was used so that a total of 82 people with mild dementia participated in self-management programs in the 9 community centres. The scales of self-efficacy, exercise days, and depressive symptoms were tested before and after the program.

**Results:** A total of 70 people with mild dementia completed the pre- and post-tests. The average scores of the pre-tests were self-efficacy ( $27.12 \pm 8.07$ ), exercise days ( $4.34 \pm 1.84$ ) and depressive symptoms ( $1.71 \pm 2.49$ ), respectively. The post-test mean scores were self-efficacy ( $29.83 \pm 9.03$ ), exercise days ( $4.91 \pm 1.85$ ) and depressive symptoms ( $1.23 \pm 2.50$ ), and the paired-t (p values) were -2.95 ( $p=0.004$ ), -3.27 ( $p=0.002$ ), 2.37 ( $p=0.021$ ), respectively.

**Conclusion:** People with mild dementia are able to participate in self-management. Preliminary results show that self-management programs can help people with dementia improve self-efficacy, exercise frequency and reduce depression. It is suggested that self-management programs can be promoted in community dementia care centres.

### **Artificial intelligence.**

#### **PP62. Healthy ageing messages for older people to reduce risk of dementia: How accurate is ChatGPT?**

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**Background:** ChatGPT is an artificial intelligence chatbot by OpenAI. This has multiple features, including an ability to answer questions, follow complex instructions and solve problems. However, not all responses may be accurate. We reviewed the healthy ageing messages from ChatGPT to review the accuracy of advice given.

**Methods:** Topics or heading of healthy ageing messages were obtained from the ASEAN healthy ageing messages developed in Brunei. The question typed into ChatGPT was "What advice should be given to older people

on...?" with the relevant topic inserted into the space, with follow-up questions asked depending on the responses from ChatGPT.

**Results:** ChatGPT responses were generally acceptable and covered much general information. Follow-up questions are usually required for adequate elaborations on the health measures to take. Specific details such as where to access services are unable to be answered. Responses may not be applicable to different contexts, such as questions regarding fasting. Questions regarding medical treatment are generally responded to by a request to seek a medical consultation.

**Conclusion:** ChatGPT is able to provide general healthy ageing messages or advice, which are important to reduce the risk of dementia. For more specific details required, it may be advisable to use conventional search engines such as Google.

### **PP63. ChatGPT and its potential utility for caregivers of people living with dementia.**

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**Background:** Providing care for a person with dementia can be challenging. As the disease progresses through the stages of dementia with associated changes in care needs, caregivers may have questions regarding how to provide optimum care for their loved ones. Caregivers need to learn practical approaches and access available resources, which includes ChatGPT. ChatGPT is a web-based, artificial intelligence tool developed by OpenAI that generates text responses to questions and word prompts. We evaluated whether chatGPT would be useful for people seeking medical and caregiving information about dementia.

**Methods:** General questions around dementia were typed into ChatGPT. This included "What is dementia?", "What are the different types of dementia?", "What are the different stages of dementia?", "What are the risk factors for dementia?", "Is there a cure for dementia?", "How is dementia treated?". Caregiving advice such as how to assist a person with dementia on basic activities of daily living (ADL) like walking, transferring, clothing, feeding, bathing and toileting were asked. Each ADL task was typed into chatGPT with follow-up questions added as required.

**Results:** ChatGPT can adequately provide information on a vast number of topics. Responses were mainly basic and generic but were technically correct and of acceptable quality. Follow-up questions were usually required to elaborate on certain medical responses and caregiving tips. Questions on highly technical topics or regarding medical treatment were generally advised to seek a medical or allied health professional consultation.

**Conclusions:** Responses from ChatGPT could be used as a starting point for basic caregiver tips for a person with dementia. However, additional research outside ChatGPT and seeking advice from a doctor or therapists is required for more specific information or individualised advice for a person with dementia.

### **PP64. Use of artificial intelligence in the practice of evidence-based medicine.**

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**Background:** Artificial Intelligence (AI) is expected to play a prominent role in our healthcare system. With its ability to process

large data sets, medical search engines powered by AI have been created to provide trustworthy medical information. Consensus AI is a tool using artificial intelligence to extract information from scientific papers to provide evidence-based answers. We compared the answers to questions regarding preventive treatment for dementia provided by Consensus AI and the latest review paper to assess its reliability.

**Methods:** Three enquiries on dementia prevention were input into Consensus AI and Google Scholar. The questions were: Does vitamin E supplementation reduce risk of dementia? Does Ginkgo biloba supplementation reduce risk of dementia? Does Coenzyme Q10 supplementation reduce risk of dementia? A filter of 'all years' was applied to Consensus whereas filters of 'reviews' and 'since 2019' were applied to Google Scholar. The result summary and a 'Consensus Meter' was compared to the most recent review found in Google Scholar.

**Results:** For all three questions, the conclusions drawn from Consensus AI and the latest review paper from Google Scholar were similar. For the first and third questions, further studies were recommended. For the second question, studies showed positive effects of Ginkgo biloba in cognition.

**Conclusion:** The current capacity of AI-powered search engines may not meet the standards for decision making in evidence-based medicine. However, there is significant promise that AI-powered search engines may be able to quickly answer clinical questions similar to reviews utilising scholarly databases in the future.

