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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.

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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 Zulkipli¹, Shyh Poh Teo^{1,2}.

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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 Kyaw¹, Ei Mon Win¹, Min Banyar Han¹, Shyh Poh Teo^{1,2}.

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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^{1,2}, Noridah Halim¹, Misli` Kula¹, Shyh Poh Teo^{1,3}.

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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^{1,2}, Sunjida Shahriah^{1,3}, Suman Seshkar¹, Somaye Pouy^{1,4}, Sidharth Puri^{1,5}, Hemdeep Kaur¹, Shyh Poh Teo^{1,6-7}, Sucheera Amornmahaphun^{1,8}, Shoon Mya Aye¹, Risa Vernette N Sangma¹, Harjot Singh^{1,9}, Zannat Ara¹.

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⁹ Department of Community Medicine, Sri Guru Ram Das University of Health Sciences, Sri Amritsar, Punjab, India.

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.

Amanina Nabihah Matsah¹, Yusnida Yussof¹, Salwa Abdul Rahman¹, Muhammad Ali Muhammad Ariffin¹, Shyh Poh Teo^{1,2}.

¹ **Geriatrics and Palliative Unit, Department of Internal Medicine, RIPAS Hospital, 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.

Shyh Poh Teo^{1,2}, Chia Wei Tan¹.

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

² **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.

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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.

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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.

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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.

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³ Department of Renal Services, Ministry of Health.

⁴ Pusat Dakwah Islamiah, Ministry of Religious Affairs.

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⁶ Department of Co-curriculum Education, Ministry of Education.

⁷ Department of Community Development, Ministry of Culture Youth and Sports.

⁸ 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.

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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.

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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.

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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.

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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.

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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.

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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.

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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.

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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 17th August 2023 to 30th 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.

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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.

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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.

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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 run-down 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.

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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.

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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.

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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.

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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.

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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.

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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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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).

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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.

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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).
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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.

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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.

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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.

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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.

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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 ≥ 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.

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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

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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.

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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.

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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.

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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.

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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.

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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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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.

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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 well-being 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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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.

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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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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).

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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 30th ASEAN Summit Meeting in Manila, Philippines. The ACAI Agreement was endorsed at the 14th 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 3rd 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±8.07), exercise days (4.34±1.84) and depressive symptoms (1.71±2.49), respectively. The post-test mean scores were self-efficacy (29.83±9.03), exercise days (4.91±1.85) and depressive symptoms (1.23±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.

