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ABSTRACT:
Brunei is a country in Southeast Asia with a rapid rate of ageing. Home-based nursing (HBN) is a service in Brunei originally providing community visits for dependent people who require changes in nasogastric tubes and indwelling catheters. Since 2015, the role of HBN has expanded to include a standardised assessment approach, wound assessment and management for pressure injuries. The HBN components strengthened with geriatrics involvement included comprehensive geriatric assessment, pressure injuries, pain assessment, palliative care, and medical support, particularly during the Covid-19 pandemic. There is ongoing work required to ensure HBN provides quality services through educational initiatives and improved multidisciplinary team collaborative work.

Keywords: Brunei, Geriatrics, Home care, Older People
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INTRODUCTION:

Brunei is a small country in Southeast Asia with a population of approximately 450,000 people. According to the World Health Organisation (WHO) population projections, Brunei has a very rapid rate of ageing [1]. Thus, home-based services are essential to provide care for these patients as well as support ageing in place. In this paper, an overview of home-based services is provided as a country update of Brunei, describing how home-based care evolved and the components of care that are important for the service.

Geriatric Medicine services in Brunei started in 2009 by a physician trained in Geriatrics and Palliative Care. This is based in Raja Isteri Pengiran Anak Saleha (RIPAS) hospital, a 1260-bedded tertiary hospital in Brunei. In 2015, the arrival of a new Geriatrician led to further service development and a corresponding increase in the number of patients admitted under the service. Multidisciplinary teams were formed with weekly case conferences to discuss patients, especially discharge planning. Community nursing was also strengthened, with geriatric medicine taking over home-based nurses (HBN). This increased the feasibility to

scale up the provision of home visits to dependent patients, which initially relied on hospital -based nurses from Geriatrics and Palliative care services.

A retrospective study of Geriatric medicine admissions in 2015 showed that over 3 months, there were 76 admissions with a median age of 85 years old [2]. Two-thirds had severe functional impairment, more than a third had dementia, while almost half were bed-bound or transfers only [2]. Given the high burden of comorbidities, dementia and poor functional status, the development of community support services to manage dependent patients after discharge was warranted.

In the same year, an orthogeriatric liaison service was started. This provided routine reviews of hip fracture patients under orthopaedics to assess their risk of falls and fractures, pre-operative optimisation, post-operative rehabilitation as well as discharge planning. A separate multidisciplinary team and case conference was held weekly. An audit of hip fractures in 2014 found that a quarter of patients were conservatively managed and not operated on, thus were unlikely to regain their mobility, with a prolonged length of stay in hospital and associated increased rate of mortality [3]. These patients also required community-based visits for follow-up.

Initially, HBN was under the management and supervision of the Director of Nursing. These were community-based nurses, whose main role were technical replacement of nasogastric tubes and indwelling catheters for dependent patients. They were unfamiliar with geriatrics assessment, palliative care or managing other issues unrelated to these tubes. As these patients were bedbound, they could not attend clinics easily and follow-up was preferably provided as than home visits. Thus, HBN was taken over by Geriatrics and were taught how to carry out comprehensive geriatric assessment and manage common medical issues affecting dependent patients (in addition to their current roles of tube changes).

From 2015 to 2019, there was also an annual progressive increase in the number of patients and clinical encounters for dementia. The mean number of clinical encounters for dementia was 500 annually, with a mean of 115 new patients annually [4]. This demographic change in dementia is actively monitored to plan service provision for people with dementia; this neurodegenerative condition is associated with increasing dependence, with a likely need to access HBN services in advanced stages.

Comprehensive Geriatric Assessment:

The main challenge for HBN staff to adapt to their increased scope of services in managing dependent older people was to learn about

comprehensive geriatric assessment. Training sessions were provided to ensure a systematic approach and handover during the case conferences. An assessment proforma was provided, which ensured screening for common geriatric conditions, such as malnutrition, delirium, falls, pressure injuries and pain. In addition to history taking, these conditions should be proactively reviewed during the clinical examination. For example, all dependent patients should have their buttock, sacrum and heels routinely checked for pressure injuries during the home visits. The Identification, Situation, Background, Assessment and Recommendation (ISBAR) was used for handover [5].

There were several areas that were identified as concerns for community patients. Firstly, nutritional needs should be provided to ensure the well-being of patients. A study among Geriatrics and Palliative inpatients found that more than half of the older people had BMI below 20 kg/m^2, while two-thirds of the palliative inpatients had more than a 5% weight loss in the previous six months [6]. This is a problem, as weight loss and undernutrition are associated with a poor prognosis.

The dependent older people were also observed to have recurrent admissions with chest infections. It was found that these patients also had poor oral health, which may contribute to pneumonia [7]. Oral care and maintaining dental hygiene is another aspect of care that HBN found often neglected among the care of dependent older people [8].

Finally, medication reconciliation and review should be performed during the home visit. As older people have many medications and are at risk of polypharmacy, it is important to check how patients keep the medications, whether they have problems taking medications (for example, dysphagia may make it difficult to swallow tablets) and whether there is a discrepancy between expected supply and remaining number of medications [9].

Pressure Injuries:

Given the increasing number of older inpatients in RIPAS hospital, a retrospective review of medical inpatient charts was performed to assess the risk factors for pressure injuries in 2017. It was found that less than 40% of the patients had the assessment forms completed, while among those with forms completed, one in five had pressure injuries [10]. The most common sites were buttock, sacrum and heel.

Several initiatives to improve the situation were initiated: firstly, guidelines for pressure injury risk assessment and management for inpatients were developed. These recommendations were advised and reinforced by geriatrics nurses

while in hospital, as well as the home-based nurses during visits in the community [11].

Workshops were also given to nursing staff including HBN regarding how to manage wounds. It was found that equipment and supplies were limited to gauze and primapore, making it difficult to follow international wound management recommendations [12]. Some patients were unable to acquire hospital beds or pressure relieving mattresses; thus, a list of suppliers was obtained for people to access them. Sponsors were obtained to stock these items in an equipment library; for those unable to afford them, they were provided after a financial review by the medical social worker [12].

Pain:

Pain is a symptom associated with a poor quality of life that should be managed in all patients, regardless of whether they are in hospital or at home. This was found to be poorly managed in older people in Brunei. A retrospective review of electronic health records for older people under Geriatrics and Orthopaedics found that documentation of pain as a symptom, descriptions of pain and severity should be improved. The response to pain relief (if given) and side effects were also poorly monitored [13].

A survey of 287 healthcare professionals in medical and surgical wards in Brunei hospitals found that pain assessment was not carried out regularly despite a high knowledge of pain assessment, awareness of the importance of pain assessment tools and availability of these tools [14]. Thus, there was a need to standardise the approach to pain assessment and utilisation of these tools in Brunei.

When clinicians were asked regarding barriers and solutions for improving pain management practices, it was found that there was some apprehension among patients and healthcare practitioners limiting the appropriate use of tailored pain medications. There was also a need to improve teamwork among clinicians to ensure adequate assessment and management, as well as adapting guidelines for local or cultural preferences [15].

To this end, assessment tools for evaluating pain severity and types of pain in older people were developed and disseminated to staff in hospitals and the community [16]. Pain descriptors were difficult to apply locally, given the language and cultural differences in using these tools.

The Short Form McGill Pain Questionnaire 2 (SF-MPQ-2) was translated with 21 pain descriptors adapted for use in Brunei. It was found that this tool was more likely to elucidate complaints of pain from local patients, compared to the visual analogue scale [17].

COVID-19 pandemic:

The pandemic required adjustments to many services, including HBN services in Brunei. While many services were suspended to cover COVID-related services, there was a delay in recognising that it was not possible to hold off these community services for dependent patients, particularly the scheduled tube changes. Eventually, HBN were also provided access to personal protective equipment (PPE) or mask fitting sessions to ensure they were adequately protected while wearing N95 (FFP2) masks. These were initially reserved for front-liners managing emergency services.

A protocol was developed requiring patients and family members to have negative antigen rapid tests (ARTs) before a home visit. Patients had their change of indwelling catheters and nasogastric tubes extended from four weeks to six weeks. To reduce multiple encounters, HBN contacted for tracheostomy or gastrostomy tubes were advised to contact relevant specialty nurses based in the tertiary hospital [18].

Rehabilitation and allied health professional input was reduced in hospital during the pandemic. The reduction in contact with family also meant that preventive measures for reducing risk of pressure injuries were less adhered to, both by family members and staff. Unfortunately, during the pandemic, there was an observed increase in severe pressure injuries, a few resulting in osteomyelitis, requiring prolonged admission for intravenous antibiotics and regular bedside debridement of the wounds [19]. HBN were advised to monitor for changes in functional status and advise self-management, including provision of exercise sheets to reduce the risk of functional decline in patients [20].

It was also important to monitor for mental health sequalae among patients and family members during the pandemic [21]. Out of necessity, the roles of HBN were expanded further to ensure holistic care of these dependent patients. By the end of December 2022, it was found that the number of patients under HBN remained high, with 123 male patients and 131 female patients under their care [22].

Palliative Care:

As HBN provide care for dependent older patients, palliative care knowledge was essential, as it may be appropriate to consider palliation at home rather than a review in hospital if a patient worsens. Palliative care is an essential skill, with a recognised need for a national palliative and end of life care policy in Brunei [23]. The concept of trajectory of illness was taught to HBN, which enabled clinicians to recognise where the patient is at, predict likely prognosis and offer appropriate treatment decisions. Such decisions required clinicians to balance the pros and cos of aggressive curative

intent versus a focus on symptomatic management only, which could be done at home [24].

The Gold Standards Framework is used by primary care to identify patients that would benefit from a palliative approach [25]. This provides a list of medical conditions that are associated with a short life expectancy. Once the goal of palliative care has been determined, ongoing discussions on treatment goals and continuity of care should be done by HBN. There is ongoing work to improve advance care planning (ACP) and how to broach these sensitive discussions with patients and family. A particular challenge in Brunei is adapting the ACP discussions towards a localised approach; cross-cultural adaptations were necessary to ensure that participants remained engaged in ongoing conversations regarding their direction of treatment and care [26]. Documentation of these discussions in the clinical records also needs to be improved, as shown in a local audit of ACP for Alzheimer's disease in Brunei [27].

The COVID-19 pandemic highlighted the need for discussions on goals of treatment, ACP and palliative care, as many patients did not want to go to hospital because of COVID-19 infections [28]. These efforts should continue despite the endemic situation, as the public have better awareness regarding the concept of palliative care, not only for terminal patients but also as part of the continuum of care for all patients.

Way Forward:

After the COVID-19 pandemic settled and usual clinical services resumed back to normal, HBN services were decentralised to respective health centres. In Brunei, primary care is provided through a network of community health-centres, each covering a specific geographical area. This would allow improved continuity of care; general practitioners would provide medical support for patients in the community when they become more dependent, rather than refer to hospital-based geriatric medicine services to oversee HBN care.

The quality of care provided by HBN should meet appropriate standards. A recent survey utilised the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ), which found that there was an overall high satisfaction rate from caregivers regarding HBN services [29]. The nursing care aspects rated excellent include "concern and caring by nurses", "helpfulness" and "skill and competence of nurses", while the lowest-scoring aspects were "informing family or friends", "instructions" and "consideration of your needs".

Areas for future improvement included information for care recipients and interventions to promote better transfer of information towards care recipients [29].

As HBN patients are dependent on caregivers, it is also important to recognise the importance of caregiver's health and well-being. A study of HBN caregivers found that there was a high rate of caregiver burden in terms of general strain, isolation and disappointment [30]. Further work needs to be done to collaboratively develop care plans with primary caregivers accounting for both patient and caregiver well-being.

Ongoing educational sessions to upskill HBN knowledge and technical expertise is also required. Problem-based learning particularly from challenging cases brought up in the case conference, as well as interprofessional education with other allied health professionals may help promote collaborative working and team building [31]. For example, a patient with purple urine bag syndrome stimulated discussions regarding the condition, which encouraged scheduled teaching sessions for HBN [32].

Finally, teleconsultation or virtual clinics were introduced by Geriatrics services during the second wave of COVID-19 in Brunei. While there is currently a shortage of geriatric medicine doctors to provide community visits, there is the possibility of joint consultations with HBN present in person with the patient for teleconsultation reviews. This may help facilitate family meetings, discussions of treatment goals and ACP.

CONCLUSION:

HBN are an essential service providing community-based reviews of dependent older people in Brunei. HBN components strengthened with geriatrics involvement included comprehensive geriatric assessment, pressure injuries, pain assessment, palliative care, and medical support, particularly during the pandemic. There is ongoing work to ensure HBN provides quality services through educational initiatives and improved multidisciplinary team collaboration.

Conflict of Interest:

The author has no conflicts of interests to declare.

REFERENCES:

1. WHO Regional Office for the Western Pacific. Regional action plan on healthy ageing in the Western Pacific 2020. Available from: https://apps.who.int/iris/handle/10665/3398
2. Teo SP. Geriatrics inpatients in RIPAS hospital, Brunei: patient characteristics and rehabilitation needs. J Clin Gerontol Geriatr 2018;9(2):52-58.
3. Teo SP. Audit of hip fractures and standards of care in Brunei Darussalam. J Med Biosci 2022;4(1):19-24.
4. Teo SP. Dementia clinical encounters in Brunei 2015 to 2021 based on electronic health records. Aging Comm 2022;4(2):8.
5. Kula M, Teo SP. Geriatric nurses home visits: considerations for evaluating

immobile older patients in the community. Pac J Med Sci 2020;21(1):58-67.
6. Teo GY, Teo SP. High prevalence of malnutrition among Geriatric and Palliative inpatients: the importance of malnutrition screening. Pac J Med Sci 2019;19(2):49-5.
7. Teo SP. Oral health for healthy ageing. Geriatr Gerontol Aging 2021;15:e0210034.
8. Tan CS, Teo SP, Kula M, Halim N, Rahman HA, Dhaliwal JS. Prevalence of oral health problems and dental hygiene practices in older medical patients in RIPAS Hospital, Brunei. J Gerontol Geriatr 2019;67:109.
9. Rosli N, Teo SP. Reducing medication error and polypharmacy in older people. Asian J Gerontol Geriatr 2020;15(2):86-90.
10. Kula M, Teo SP. Prevalence and risk factor assessments of pressure ulcers among medical in-patients in RIPAS Hospital. Brunei Int Med J 2018;14:151-156.
11. Teo SP, Halim N. Pressure injury prevention and management – hospital initiatives and interventions. J Gerontol Geriatr 2019;67:235-238.
12. Teo SP, Suhai K. Reflections from wound workshops. Clin Teach 2018;15:258-259.
13. Teo SP. Adequacy of pain assessment documentation in older people – can we do better? Chula Med Bull 2021;3(1):43-46.
14. Chin ASF, Husaini A, Abdul Rahman NA, Venkatasalu MR, Abdullah K, Abdul Rahman H, Teo SP. Acute pain assessment practice among healthcare professionals from medical and surgical wards in Brunei hospitals. Aging Med Healthc 2021;12(3):72-81.
15. Akbar N, Teo SP, Hj Abdul Rahman HNA, Hj Husaini HA, Venkatasalu MR. Barriers and solutions for improving pain management practices in acute hospital settings: perspectives of healthcare practitioners for a pain-free hospital initiative. Ann Geriatr Med Res 2019;23(4):190-196.
16. Maidin MA, Teo SP. Assessment tools for pain severity in the elderly: a review. Pac J Med Sci 2020;20(2):63-67.
17. Maidin MA, Abdul Rahman NA, Husaini A, Teo SP. Pain descriptors and adaptation of Short Form McGill Pain Questionnaire 2 (SF-MPQ-2) for older people in Brunei Darussalam. Palliat Med Pract 2023;17(3):130-135.
18. Sofian AIH, Md Jappar SAN, Amzizulfadzillah FA, Mat Sarudin MSH, Husaini NH, Yaakub A, Timbang ZA, Teo SP. COVID-19 pandemic situation analysis for Brunei Darussalam – perspectives from the front line, Geriatric medicine and mental health. Pac J Med Sci 2021;21(2):5-11.
19. Ahmad MH, Halim N, Teo SP. Stage 4 sacral pressure injuries among fully dependent older adults during the COVID-19 pandemic. Aging Med Healthc 2021;12(4):159-161.
20. Teo SP. Planning rehabilitation and allied health professional input for older inpatients during the COVID-19 pandemic. Middle East J Rehabil Health Stud 2021;8(1):e106695.
21. Teo SP. Preventing transmission of COVID-19 infections and the mental health sequalae among older people. Chula Med J 2020;64(3):355-356.
22. Lim YH, Teo SP. Geriatrics services in hospital and the community during the COVID-19 pandemic – the Brunei experience. Pac J Med Sci 2023;24(1):24.
23. Venkatasalu MR, Teo SP, Abdullah S, Mohamad Z, Kelali H, Husaini A. The need for a national palliative and end of life care policy in Brunei Darussalam. Brunei Darussalam J Health 2017;7(1):1-4.
24. Teo SP. Geriatric medicine concepts: trajectory of illness, life course approach and comprehensive geriatric assessment. Pac J Med Sci 2021;22(1):82-88.
25. Chong JX, Teo SP, Husaini A, Venkatasalu MR. Gold standards framework can identify primary care patients who would benefit from a palliative approach. J Am Med Direct Assoc 2020;21:1353-1356.
26. Foo ST, Teo SP, Husaini A, Venkatasalu MR. Cross-cultural adaptation of advance

care planning (ACP) for primary care settings. Aging Med Healthc 2020;11(1):35.
27. Choo SZL, Rosli N, Teo SP. Audit of advance care planning documentation for Alzheimer's disease in Brunei. Palliat Med Pract 2022;16(1):66-68.
28. Aye SM, Amornmahaphun S, Dwivedi S, Shahriah S, Teo SP. Development of palliative care services and impact of COVID-19 pandemic: situation analysis from five Asian countries. Pac J Med Sci 2023;24(1):48-57.
29. Haji Muhammad Ariffin MY, Abdul Rahman H, Abdullah Kelali MN, Haji Anapi SN, Teo SP. Evaluating patients' and families' satisfaction with home-based nursing (HBN) services in Brunei. Singapore Nurs J 2020;47:17-24.
30. Han AY, Kelali MNA, Rahman HA. Multidimensional aassessment of caregiver burden in home-based nursing: a cross-sectional study. J Gerontol Geriatr 2020;68(3):146-151.
31. Han MB, Teo SP. Opportunities to improve undergraduate Geriatric medicine education in the post-pandemic era. Rev Med Uni 2023;25(3):115-116.
32. Tan SY, Teo SP. Purple urine bag syndrome. Aging Med Healthc 2019;10(4):146-147.
33. Teo SP. Telemedicine or virtual consultations for older adults during the COVID-19 pandemic. Asian J Gerontol Geriatr 2022;17(1):37-38.