PACIFIC JOURNAL OF MEDICAL SCIENCES

{Formerly: Medical Sciences Bulletin}

ISSN: 2072 – 1625

Pac. J. Med. Sci. (PJMS)

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Running Title: *COVID-19 situation in Brunei*

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Submitted: December 2020; Accepted: January 2021

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ABSTRACT:
This paper outlines the COVID-19 pandemic situation analysis for Brunei Darussalam, covering perspectives from the front-line, geriatric medicine and mental health. This content was presented at a webinar entitled "COVID-19 and older persons in Brunei Darussalam" held on 9th October 2020. Brunei's response to COVID-19 and flattening the curve, COVID-19 and older people in Brunei Darussalam and mental health aspects among older people during the COVID-19 pandemic are discussed. The impact of COVID-19 on geriatric medicine services locally, challenges for older people requiring medical input and recommendations for older people during the pandemic are described. The impact of the pandemic on psychiatry services and to people's mental health and well-being are also discussed.

Keywords: Aged; COVID-19; mental health; Pandemic

INTRODUCTION:

The content of this situation analysis was presented in a webinar held in Brunei Darussalam on 9th October 2020. This was organised by the Shield Our Seniors (SOS) team, a group of five third year undergraduate medical students from the Institute of Health Sciences, Universiti Brunei Darussalam. The topics discussed were as follows: Brunei's response to COVID-19 and flattening the curve; COVID-19 and older people in Brunei Darussalam and Mental health aspects among older people during the COVID-19 pandemic. These were presented by a front-line physician, Consultant Geriatrician and a senior Psychiatry medical officer respectively. The 'COVID-19 and older persons in Brunei Darussalam' webinar is available online. [1]

Brunei's response to COVID-19 and flattening the curve:

When the first COVID-19 cases surfaced from Wuhan in December 2019, local Brunei Infectious Disease specialists raised concerns regarding the potential international implications of this novel coronavirus. Once the pandemic took off from the epicentre, meetings had already started to plan logistical issues, such as initial response and training of healthcare professionals regarding infection control and use of personal protective equipment (PPE). The seriousness of the situation led to Wuhan being in lockdown, requiring repatriation of two Brunei citizens with a retrieval team and a chartered flight.

The first local case in Brunei was diagnosed on 9th March 2020, which originated from Kuala Lumpur at a super-spreader event [2]. There was a rapid emergence of new cases, including local clusters identified. The first local death due to COVID-19 complications was a 64-year-old man, who passed away on 28th March 2020 [3].

The national response was swift - travel regulations were tightened, with special permission required for entry and exit. As rigorous contact tracing was necessary to control the infection, the “Bru-Health” app was developed and implemented early. It was mandated that members of the public use the app to fill out a symptom checklist daily and scan themselves in and out of places. Brunei also has one of the highest rates of testing for its population. The sports complex in RIPAS Hospital was converted into a COVID-19 screening centre, which functioned 24 hours daily, 7 days a week (currently it opens 7am to 10pm daily). Staff members were asked to assist with testing among the other frontline tasks. The new testing lab was built at Sumbiling to increase testing capacity and improve turnaround time. COVID-19 positive patients were initially admitted into the isolation centre, previously mainly used for tuberculosis patients. A new National Isolation Centre was also built in Tutong district to accommodate the number of patients requiring isolation [4].

Social distancing measures were enforced, including closure of places of worship such as mosques and churches. This was significant for Brunei as a predominantly Muslim country, and people were unable to congregate for prayers. Schools, shops and dine-in restaurants were closed temporarily, requiring people to adjust to online approaches for learning and shopping [5]. Although this was a difficult time for businesses, resilience and innovation meant new online business opportunities and delivery services developed in the country.

The leadership shown by the government led by his majesty the Sultan of Brunei enabled the rapid multi-sectorial response to manage the pandemic. The spiritual approach was embraced, where the state mufti (scholar) gave a fatwa, or legal pronouncement in March 2020, providing spiritual guidance during the pandemic. The Ministry of Health was proactive in disseminating information on measures to curb spread of the virus, such as social distancing and hand hygiene. There was initial

daily media coverage of the pandemic, also screened via social media to promote transparency and correct false information or rumours [6].

While there was an initial adjustment phase, the public were overall compliant to regulations and social restrictions. There was also unity and support for front-liners, with volunteers stepping forward to offer assistance when required. Various businesses and organisations (government and non-government) contributed resources and encouragement for front-liners during this difficult time. International aid was also received from other countries, who contributed expertise, resources and PPE supplies. The multinational collaboration was reciprocal with Brunei assisting people to return home by coordinating and organising flights.

These actions led to flattening of the curve by April 2020, with occasional spikes of imported cases. As of 9th October 2020, there were 154 days without new local cases, 146 COVID-19 cases and 3 deaths in the country. The main challenge now is the uncertainty, where the country must remain vigilant and united to manage the pandemic situation.

***COVID-19 and older people in Brunei Darussalam*:**

Older people have a higher risk of mortality from COVID-19 infections. Older people also tend to have more comorbidities. Cardiovascular disease, diabetes, chronic respiratory disease, hypertension and cancer are associated with mortality from COVID-19 infections, hence older people are a high risk group during this pandemic [7, 8].

In Brunei, the pandemic had a significant impact on geriatrics and palliative services. Two-thirds of the specialists were responsible for frontline initiatives, while staff including doctors, nurses and allied health professionals were pulled for COVID-19 related tasks, such as covering the National Isolation centre, isolation wards, swabbing and contact tracing duties. All non-urgent and outpatient services were deferred or cancelled, including a weekly dementia support group. Nurse-led home visits were cancelled due to concerns regarding infection risk. Initially, essential reviews were seen and brought forward, as the imminent interruption to services was predicted. Phone-call follow-ups were made explaining the situation, and medication prescriptions were renewed by proxy. The unit also reviewed urgent clinic cases and renewed prescriptions for all the Tutong clinics within a fortnight since the first local case, as Tutong physicians took charge of the National Isolation Centre. The service also had to move offices, as adjoining wards sharing the same ventilation were earmarked for potential isolation wards for the hospital.

Visitor restrictions were mandatory, limiting availability of family assistance for admitted patients. There was also an incident where a geriatrics patient was visited by a relative, while having symptoms and a positive COVID-19 test two days later. When this was identified through

contact tracing, the geriatrics team and ward staff in contact with this patient were instructed to self-isolate until swab results from the patient came back negative. This stand-down period had significant implications for the clinical service.

There were additional challenges in providing geriatrics and palliative services. Patients presenting with influenza-like illnesses and community acquired pneumonia were screened and admitted to isolation wards while awaiting swab results. This delayed input from the primary team and allied health professionals. PPE had to be worn to see these patients for infection prevention and control, with an initial shortage of supplies [9]. It was occasionally difficult to decide the risk-benefit of admitting patients to hospital, which may expose them to hospital infections or COVID-19. There were frequent updates in workflow protocols and Standard Operating Procedures, particularly at the start of the pandemic. The staff had concerns regarding their safety from occupational exposure to the virus resulting in increased stress and anxiety.

When the first local case was announced, there was an initial reluctance for patients to come into hospital. After a low admission rate for approximately two weeks, there was a noticeable surge in geriatric admissions. Patients were generally frail or dependent older patients who required hospitalisation due to limited community geriatrics services, or older patients who delayed seeking treatment from fear of coming to hospital during the pandemic. These patients were severely unwell, sustained multiple complications and required a longer length of stay for treatment.

This pandemic caused several complications for older inpatients. Delirium is common for older people who are unwell with cognitive impairment. This was often seen in patients stepped down from isolation wards, particularly at the initial phase with a three-day turnaround time for swab results. Delirium was exacerbated by the limited personal contact, lack of orientation and frequent interruptions to rest from routine monitoring procedures. It is difficult to implement strategies to manage delirium in isolation wards, such as providing reorientation and assistance with mobility and toileting, ensuring hydration and nutrition, and availability of hearing aids and glasses [10].

There was also an increase in older people sustaining pressure injuries. This was likely due to limited caregiving by family with enforced social distancing measures and lack of monitoring due to suspended nursing home-visits. The first three months saw nine patients admitted with Stage 4 sacral pressure injuries complicated by osteomyelitis. Two-thirds passed away in hospital, and all required daily intensive nursing input to debride and manage wounds. An emphasis on pressure injury prevention and caregiver education regarding as regular turns, lifting approaches to avoid shearing and considering ripple mattresses is necessary to reduce this risk [11].

There are several recommendations for older people during the pandemic due to the high risk of complications with COVID-19. Infection prevention and control measures such as social distancing, hand hygiene and mask wearing is recommended. As the virus can be transmitted via fomites, it is important to disinfect and clean furniture surfaces often [12]. It is important to maintain health with adequate nutrition, hydration and sleep. Physical activity should be maintained as possible. It is crucial to know who and how to call for medical advice and renewing medications. Advance care planning is encouraged, where people discuss their care preferences and who should be contacted if decisions should be made on their behalf [13].

From the service perspective, there is a need to help older people self-manage their medical conditions and raise awareness of healthy ageing measures to improve functional reserve. Educational initiatives are planned to improve delirium management in isolation wards and pressure injury prevention among caregivers. Video consultations were also introduced for virtual patient reviews to ensure follow-up and continuity of care during the pandemic.

Mental health aspects among older people during the COVID-19 pandemic:

Mental health is defined as a state of well-being, where a person realizes their own abilities, is able to cope with normal stresses of life, work productively and contribute to society. It is more than just the absence of mental disorders or disabilities, and affects how people think, feel and behave [14].

Due to the global threat, the World Health Organisation (WHO) recommended strict social isolation to reduce mortality from COVID-19. The pandemic and such advice was associated with increased fear, panic and apprehension. Advanced age is a predisposing factor for physical and mental health issues. Older people are also prone to social isolation and loneliness, which worsened with social distancing measures [15]. Family members reduced visiting to reduce exposing loved ones to potential infections. These strict lockdowns and limited social interaction can precipitate mood and anxiety issues, further compounded by a near-constant stream of COVID-19 pandemic information such as infection and mortality rates via the news and social media [12]. Effects on physical activity, sleep, poor access to basic needs such as food and medications can worsen mental health, or cause relapses in those with predisposing mental health conditions. For older people with cognitive impairment, it may be difficult to comply with social distancing and infection control measures, while wandering, irritability and psychotic symptoms can cause panic among family and caregivers [16].

The Psychiatry Department followed Ministry of Health guidelines for patients, visitors and healthcare professionals. This included signing into the “Bru-Health” app, temperature screening and hand hygiene measures before

entering the facilities. Patient's visitors were limited to 15 minutes, with only one visitor permitted at a time. Patients from the Old Age Clinic were rescheduled if stable, with options given for walk-in consultations if needed. Community Psychiatry patients had visits withheld and medication prescriptions were renewed automatically. Psychiatry doctors had to be dispatched to the National Isolation Centre, as quarantined patients required input for mental health issues. While pre-existing patient consultations remained stable, there was an increase in new patients, especially anxiety requiring psychological input.

There are several recommendations to maintain mental health for older people during the pandemic. The holistic involvement of family members and caregivers is essential, with a need for increased sensitivity to mental health. Social connectedness and support is necessary, which can be facilitated through regular phone-calls and technology, such as "WhatsApp". It is beneficial for older people to participate in enriching activities, learn new things and perform self-help activities such as meditation, relaxation and exercise. Reducing digital screen time may be helpful to prevent misinformation and panic, while vivid data and unnecessary statistics are better avoided. Family support is needed more than ever during this difficult time, as older people and their caregivers may be negatively impacted by social isolation. Autonomy, respect and dignity for all individuals should be preserved. While taking care of older people is important, there is a need for them to maintain active involvement in decision making [13]. While social distancing is important for physical health, social connectedness and mental health should also be maintained. There should also be increased awareness and sensitivity to the needs of those with pre-existing mental health disorders such as dementia, depression and anxiety during this time [17].

ACKNOWLEDGEMENTS:

Appreciation to Professor Dr Mohd Ayub Sadiq and Dr Fazean Irdayati Hj Idris for the supervision and support with the Shield Our Seniors (SOS) project to raise awareness of COVID-19 among older people;

Thank you to the front-liners and volunteers for the tireless hard work to keep the country safe during these challenging times.

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