

limit the risk of spreading the virus in facilities caring for older patients at all costs. This could mean drastic quarantine measures for staff members who have stayed in high-risk areas or have been in close contact with possible cases. If any suspected case of COVID-19 infection occurs, transfer to a specialized facility as soon as possible is crucial since long-term care facilities are not adequately equipped to effectively manage case containment. While waiting for the transfer, placing the patient in a single room, wearing a mask (N95 or FFP2 respirators for healthcare practitioners), and careful hand hygiene using alcohol-based hand rub (or soap and water when hands are visibly soiled) are the key prevention measures to limit spread of COVID-19. They must also be combined with eye protection and systematic use of disposable blouses and gloves to provide the optimal level of protection.

Clinical management of COVID-19 should be guided by the World Health Organization and the Centers for Disease Control and Prevention.^{9,10} There is no specific recommendation for older adults. The Centers for Disease Control and Prevention state that there is no specific antiviral treatment recommended, and patients should receive supportive care to help relieve symptoms. For severe cases, treatment should include care to support vital organ functions.¹⁰ Secondary prevention and care of general complications could also be a major issue in older patients. Indeed, in seasonal influenza, for example, a large proportion of deaths are related to decompensation of comorbidities and complications occurring after the infection.⁷ Particularly, reducing incidence of venous thromboembolism, catheter-related bloodstream infection, pressure ulcers, falls, and delirium is recommended. These measures should be adapted to comorbidities, polypharmacy, and frailty of older patients.^{9,10} We assume that they could also be crucial in case of COVID-19 in older adults.

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CHINA'S OLDEST CORONAVIRUS SURVIVORS

The outbreak of the novel coronavirus disease 2019 (COVID-19) represents a global human pandemic. As of March 16, 2020, 167,515 cases were reported in 151 countries and regions. The death toll worldwide has reached 6,606, far exceeding the fatalities of two other coronavirus diseases—severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS)—combined.¹ Clinical studies consistently show that critical conditions and deaths associated with COVID-19 occurred particularly in older adults, especially those with chronic multimorbidity.^{2,3} Extraordinarily, five older patients aged 98 years and over were discharged from hospitals, four of whom were in Wuhan—the epicenter of the global outbreak. Here we present their successful stories to inspire medical staff, patients, and the public.

The first case was the oldest so far reported. A 103-year-old woman who had a confirmed positive

nucleic acid test result for COVID-19 on March 1 was admitted to the Li-Yuan Hospital, Tongji Medical College of Huazhong University of Science and Technology.⁴ She was bedridden with preexisting Alzheimer's disease and other comorbidities. Ward physicians and nurses tried hard to communicate with her accurately. Computed tomography (CT) imaging proved pleural effusion. Her condition was severe at admission yet improved with nurses' care and supportive treatments. She became nucleic acid negative on March 6 and returned home two days later.

The second patient was a 98-year-old woman who presented with constant fever ($>38.5^{\circ}\text{C}$) and fatigue on February 3.⁵ She lived with her 79-year-old daughter, and her 49-year-old granddaughter, who lived elsewhere, joined them for the Chinese Spring Festival. The three women showed COVID-19 pneumonia as confirmed by CT scan and nucleic acid tests. They were admitted to the Wuhan First Hospital and shared a ward on February 13. After 10 more days of supportive therapies and individualized nutritional supplementation, the 98-year-old woman, together with her daughter and granddaughter, was confirmed to be COVID-19-free and was thus released the same day on March 3.

The third case was also a 98-year-old woman who had a high body temperature $>40^{\circ}\text{C}$ in early February.⁵ Considering her critically ill condition, she and her 55-year-old daughter, who also had the virus, were transferred to an intensive care unit in a makeshift hospital on the evening of February 13; they were discharged on March 1. The major treatments included anti-infection medication, intensive nursing care, and nutritional supplementation. Despite her heart failure, she was joyfully all cleared from the severe lung infection.

The fourth case who recovered from the coronavirus infection was a 98-year-old bishop.⁶ The pastor was diagnosed with COVID-19 pneumonia on February 3 and treated at the Central Hospital in Nanyang, Henan province, which shares its border with Hubei, the province at the heart of the epidemic. He has tested negative since February 12 and was discharged two days later. In addition to the viral infection, the bishop had comorbidities such as arrhythmia and pleural effusions. He was treated with a thoracic drainage catheter and his recovery was exceptional.

The last infected patient was a 101-year-old man who spent a week in the Wuhan Third Hospital.⁷ He became unwell in February and was immediately hospitalized after being diagnosed with the viral infection. His doctor claimed that the determined pensioner had concentrated on getting better soon so he could go home and take care of his 92-year-old wife. During hospitalization, the 101-year-old gentleman insisted on taking care of himself and was always the first to get up early for a morning walk. He clearly knew that "It is no bother and I can just do it."

Thanks to the significant commitment, hard work, and intensive care from the frontline medical staff and the Chinese government, these five oldest patients clearly show that age is definitely not a barrier to recovering from the infection. **These successful stories are indeed a joy to the world: Joy can be "infectious" and "pandemic" too.**

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PREVENTING THE SPREAD OF COVID-19 TO NURSING HOMES: EXPERIENCE FROM A SINGAPORE GERIATRIC CENTRE

To the Editor: COVID-19 is a global pandemic with extensive community spread in many countries.¹ Older adults and those with chronic medical comorbidities are seen as particularly vulnerable.² The effects when COVID-19 reaches nursing homes have been devastating,³ accounting for a disproportionate number of deaths, particularly in the United States.

Despite COVID-19 reaching our shores nearly 2 months ago, there has not been a single case of transmission in nursing homes in Singapore. To date, only one case of possible COVID-19 transmission has occurred in an acute hospital in Singapore.⁴

Since COVID-19 hit Singapore, various measures have been rolled out nationally to mitigate the spread of the highly contagious virus including the restriction of visitors to all healthcare institutions, prescreening of visitors, and reduction in unnecessary transfer of patients.⁵


Nursing home patients admitted to the hospital have to be managed carefully. They have high rates of pneumonia⁶ and it can be difficult to differentiate between aspiration pneumonitis and pneumonia.⁷ Previously, selected nursing home residents with fever and respiratory symptoms could have a trial of oral antibiotics on site or be treated conservatively if they had an advanced care plan.

However, in view of the public health consequences of COVID-19, nursing homes now refer all patients with fever and respiratory symptoms to acute hospitals to rule out the virus. All nursing home patients admitted to our institution with acute respiratory infections are isolated in negative pressure rooms and tested once for COVID-19 if the clinical suspicion is low. If there is significant concern, some patients may even be subject to a repeat swab before transfer to a general ward. Contingency plans have been made to cohort patients with respiratory symptoms and pneumonia in designated wards if cases exceed the capacity of our isolation facilities. At present we have not yet had to resort to this alternative. In addition, on discharge, nursing homes have begun to request letters from hospitals to certify that returning residents do not have COVID-19. Such heightened vigilance has prevented the spread of a single COVID-19 case to nursing homes in Singapore.

The isolation of nursing home patients has led to some negative consequences. Fall rates in isolation facilities are much higher than that in general wards. Restraint use has also gone up, whereas our geriatric medicine ward practices a no-restraint policy. Nursing home patients in particular have higher rates of dementia, delirium, and behavioral issues⁸ that require greater nursing care, which is challenging in isolation facilities, especially in the context of a global pandemic. These are inevitable given that protection

of healthcare workers is a priority, and it is difficult for healthcare staff to attend promptly to patients in isolation facilities with behavioral issues and cognitive impairment because they would need to don full personal protective equipment before any patient contact. In addition, we have started to use technology such as the Beam robot⁹ to minimize patient contact, with plans to roll these out to other institutions. However, the use of technology has limitations, especially when dealing with older patients.

Preventing the spread of COVID-19 to long-term care institutions is a priority, and rigorous heightened measures should be put in place to ensure this.

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SPECIAL ISSUES ON USING THE MONTREAL COGNITIVE ASSESSMENT FOR TELEMEDICINE ASSESSMENT DURING COVID-19

To the Editor

The coronavirus disease 2019 (COVID-19) crisis has accelerated the need for cognitive screening adapted to telemedicine. Understandably, clinicians are trying to use tools