suggested that the cutoff for the occurrence of needing care was the KCL-Nutr ≥1 with the maximal Youden Index,[4] which is the same as our results. Moreover, we showed a significant association between meeting one nutritional question and mortality. Therefore, we propose that the criteria for nutrition intervention should be revised as the KCL-Nutr ≥1.

Our proposal is based on the currently used KCL questionnaire; however, the question of the KCL-Nutr may need to be revised because of the low positive predictive value. The global malnutrition criteria recommend that the BMI cutoff for the Asian older population is <20.0 kg/m²[6] Thus, further studies that investigate the optimal BMI cutoff value in the KCL-Nutr are needed. In addition, as our covariates were limited, future study should address other confounding factors.

We believe our proposed revision would contribute to the promotion of care prevention by reducing malnutrition, until the KCL-Nutr question could be revised in the future.

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Impact of dementia on clinical outcomes in elderly patients with coronavirus 2019 (COVID-19): an experience in New York

Keywords: Alzheimer's disease, COVID-19, dementia, elderly, prognosis.

Dear Editor,

In December 2019, a novel new coronavirus known as SARS-CoV-2 was first detected in China, causing outbreaks of coronavirus 2019 (COVID-19) that have spread globally.[1] There are many risk factors associated with a poor prognosis of COVID-19, including advanced age.[2] Dementia is common among elderly patients, affecting up to 7% of individuals ≥65 years worldwide.[3] However, it remains unclear whether dementia is associated with poor clinical outcomes in elderly patients infected with COVID-19. Therefore, our study, aimed to investigate associations between dementia and poor clinical outcomes in patients with COVID-19.

Our study analyzed Mount Sinai Health System (MSHS) medical records from March 1 to April 2, 2020, using Epic SlicerDicer software. We extracted data from patients who had a positive result for the COVID-19 reverse transcription-polymerase chain reaction test during this period and continued to track them through April 11, 2020. We included patients aged ≥60 years old and compared clinical outcomes between patients with and without dementia. Our primary outcome was all-cause mortality. Secondary outcomes included the need for hospital admission, intubation or intensive care unit admission. We conducted subgroup analyses by age groups. *P* values were calculated using a two-tailed χ^2 test, and relative risk (RR) was calculated with a 95%

Table 1 Basic characteristics and outcomes of patients with COVID-19

	COVID-19 positive total (n = 2071)		*P*
	With dementia (n = 98) (n, %)	Without dementia (n = 1973) (n, %)	
Male	43 (43.9)	1056 (51.0)	0.618
Age, years			
60–79	31 (31.6)	1526 (77.3)	<0.001
≥80	67 (68.4)	447 (22.7)	
Essential hypertension	75 (76.5)	1166 (59.1)	0.0059
Diabetes mellitus	40 (40.8)	647 (32.8)	0.0996
Chronic kidney disease	7 (7.1)	169 (8.6)	0.6220
Admission	77 (78.6)	1271 (64.4)	
Intubation	4 (4.1)	207 (10.5)	
ICU admission	25 (25.5)	540 (27.4)	
Death	39 (39.8)	390 (19.8)	
Dementia types			
Alzheimer	18 (18.4)	NA	
Vascular	3 (3.1)	NA	
Dementia with Lewy body	0 (0)	NA	
Unspecified	77 (78.6)	NA	
	Age 60–79 years	**RR (95% CI)**	**Age ≥80 years**	**RR (95% CI)**
N	31/1526		67/447	
Admission	21/945	1.09 (0.86–1.40)	56/326	1.15 (1.02–1.29)
Intubation	0/158	0	4/49	0.54 (0.20–1.46)
ICU admission	9/429	1.03 (0.59–1.80)	16/111	0.96 (0.61–1.52)
Death	11/235	2.30 (1.41–3.76)	28/155	1.21 (0.88–1.64)
		Events in dementia/events in without dementia		

CI, confidence interval; NA, not applicable; RR, relative risk.

confidence interval (CI). MSHS waived Institutional Review Board approval as this research used only de-identified, aggregate-level data. In total, 2071 COVID-19 cases were reported. Of these, 1099 (53.1%) patients were men, and 98 (4.7%) had dementia. In total, 429 (20.7%) patients died during the study period. Baseline characteristics and the primary and secondary outcomes are summarized in Table 1. The proportions of those aged ≥80 years old (68.4% vs. 22.7%, *P* < 0.001) and those with hypertension (76.5% vs. 59.1%, *P* < 0.0059) were significantly higher in the dementia group. After adjusting by age group, we found a significantly increased risk of hospital admissions (RR [95% CI]: 1.15 [1.02–1.29]) in those aged ≥80 years old as well as an elevated risk of mortality (RR [95% CI]: 2.30 [1.41–3.76]) in 60–79 year olds. In contrast, no differences were observed among other comparisons.

To the best of our knowledge, this is the first study to show that patients with dementia may be at high risk for poor clinical outcomes. After dividing our patients into two age groups, thereby reducing the effects of confounding, we found that patients with dementia who are infected with COVID-19 are at higher risk for both hospital admissions and death. Dementia is a common neurocognitive disease characterized by a decline in memory and multiple skills.[3] As suggested in our study, patients with dementia generally have multiple comorbidities as compared with others, and these afflictions increase their risk of hospitalizations and mortality from viral and bacterial infections.[4] COVID-19 is known to cause severe inflammation throughout the body via disruption of the renin–angiotensin system, which is one possible mechanism for increased hospital admissions and mortality in patients with dementia who are particularly susceptible to inflammation due to multiple comorbidities.[5] Our study revealed no difference in

mortality in those aged ≥80 years old. In elderly patients, the mortality rate was remarkably high (35.6%), and we speculate that these patients are at risk for death regardless of the presence of dementia. One limitation of our study is an unclear causation between COVID-19 and clinical outcomes. In addition, the heterogeneity of dementia types may obscure the rationale of our findings. However, to our knowledge, this is the first report on the prognosis of COVID-19 in patients with dementia in the USA. The relatively large number of patients in the study allowed for the adjustment of age, which is one of the strongest prognostic factors. As the number of cases of COVID-19 is increasing rapidly, more studies of patients with dementia are possible and warranted in this pandemic.

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Preparing for COVID-19: The experiences of a long-term care facility in Taiwan

Keywords: COVID-19, healthcare professional, long-term care facility, nursing care, prevention.

Dear Editor,

As of 16 April 2020, there have been >1 991 562 confirmed cases of coronavirus disease 2019 (COVID-19) worldwide and 130 885 deaths.1 One previous study showed that COVID-19 is more likely to affect older men with comorbidities;2 the highest mortality rate was observed among persons aged ≥85, ranging 10–27%, followed by 3–11% among those aged 65–84 years.3 Long-term care facilities (LTCF) are high-risk settings for severe outcomes of the COVID-19 outbreak, owing to both the advanced age and frequent chronic underlying health conditions of the residents.4 To prevent large-scale community transmission of COVID-19, Taiwan has taken advanced steps in terms of medical care planning (e.g. border control, identifying cases, quarantining suspicious cases, proactively searching for cases, allocating resources etc.).5 Thus far, just 395 COVID-19 patients have been confirmed, six of whom have died. Only one nursing home has been in lockdown, because one of its nursing staff became infected. In this article, we share our experiences regarding how we have responded to COVID-19 in our LTFC based on the management of visitors, residents and healthcare professionals (HCP), as well as government support and policies.

The first policy we made was to limit the number of visitors when we learned that some infected individuals have no fever or respiratory symptoms. All visitors are required to: wear a mask; have their body temperature checked; voluntarily declare their history of travel, occupation, contacts and cluster; and register before entering the building. Visiting hours and the number of persons accompanying patients are gradually being reduced as the number of confirmed cases rises in Taiwan. Using big data technology, the government later makes the immigration data accessible on health insurance cards. All the visitors are required to present their health insurance card to make known if they have recently visited high-risk countries.

Regarding management of HCP, we hold regular educational and training seminars to deal with COVID-19. We actively screen HCP for fever and respiratory symptoms at the beginning of their shifts, and implement sick leave policies that

allow ill HCP to stay home. Traveling abroad is prohibited, and all employees must report their weekend and vacation activities every week. We now restrict all volunteers and non-essential HCP from entering the building. Later on, we decided to cancel all group activities, avoid communal dinners with colleagues, and to re-organize the groupings and schedules of nursing staff and attendants. One member of each group is confined to the same working place and accommodation area. To lower any risk of delayed diagnosis or misdiagnosis, if residents or HCPs have a fever or respiratory symptoms, they take a COVID-19 test.

In terms of considerations for residents, they are not allowed to leave the facility. To avoid extra contact in the hospital, our staff regularly prescribe medication for them if they are in a stable condition. In addition, we increased the number of rehabilitation clinics in the facility for residents who require rehabilitation at the hospital. To decrease the burden and risks for HCPs, our facility has become temporarily unavailable to new residents. To prepare for surge capacity in staffing, equipment and supplies, we asked the residents and their families whether they would like to return home or stay in the facility while there is an outbreak occurring within it.

International organizations have recognized the Taiwanese government for waging a successful battle against COVID-19. Just like its aggressive efforts toward border control, containment and proactive testing, the attempts to care for patients who require long-term care are not inferior to other aspects of Taiwan's overall endeavor. Initially, the government coordinated with manufacturers to help our LTFC purchase supplies, such as thermometers and ethyl alcohol. Later on – even though there has been no far-reaching community transmission – the government gave the order to keep all visitors from entering nursing homes or LTCF.

To plan ahead of time and to mitigate supply shortages if outbreaks in the community were to occur, the government checks the vacancy of LTCF beds, coordinates with neighboring hospitals to satisfy the medical needs of LTFC and has requested a prepared plan from each facility. Although we are unable to predict whether there will be extensive community transmission of COVID-18 in Taiwan, most LTCF readily cooperate with the government's policies, try to plan ahead and minimize risks as best as they are able.

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