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performing CPR." Most, although not all, of the consultants found that working in pairs offered not just practical advantages to splitting up the work (eg, one person writes the note while the other speaks), but more importantly a mechanism for debriefing and processing difficult conversations. We additionally organized weekly videoconference debriefing sessions among distance consultants. Indeed, many consultants found the debriefing sessions to be one of the most valuable parts of the experience.

# **DISCUSSION**

The COVID-19 pandemic has created significant challenges for healthcare systems, especially in hard-hit areas. One of these challenges is to meet the dramatic increase in demand for specialty-level palliative care services created by the sudden surge of critically ill patients. These circumstances have led to new opportunities for palliative care colleagues in different institutions to collaborate in unprecedented ways. The cross-pollination experienced in the course of the model described here provided a humbling reminder of the mutual benefit that accompanies extramural collaboration.

Our experience with providing high-quality specialist-level palliative care spanning institutional, state, and perhaps even national borders can serve as a model for other sites during this pandemic. Underserved racial and ethnic minorities and immigrant or displaced communities have been especially hard hit in crisis times, and the current pandemic is no exception. Unfortunately, palliative care is one of the subspecialty areas to which these populations routinely experience diminished access. Collaborative efforts such as the one described here may prove critical in meeting demand for palliative care with greater equity and justice across our systems and societies.

Looking forward, this collaborative model may also serve as a guide for meeting palliative care needs during non-pandemic times in resource-limited settings, where access to specialist-level palliative care may be limited. Consideration should be given to the extension of policies to facilitate nation-wide licensure and universal credentialing created in states of emergency, so the feasibility and ease of providing these palliative care consultative services across institutional and state borders can continue into the future beyond the current crisis.<sup>7</sup>

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### MORTALITY IN OLDER PATIENTS WITH COVID-19

To the Editor: Dr. Sun and colleagues<sup>1</sup> report risk factors for mortality in 244 older patients with 2019 coronavirus disease (COVID-19) in Wuhan, China. They found older age and lower lymphocyte count were independently associated with in-hospital mortality (IHM) in both men and women who were aged 60 and older. This early retrospective study disclosed an IHM rate as high as 49.6% (number of deaths/cases = 121/244), substantially higher than 10.0% of the 1,474 COVID-19 patients aged 65 and older from 169 hospitals in Asia, Europe, and North America,<sup>2</sup> and 32.7% of the 1,425 COVID-19 patients aged 60 and older

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in New York.<sup>3</sup> Among the 5,700 COVID-19 patients hospitalized in the New York metropolitan area, IHM rate was 15.8% (84/533), 32.2% (145/451), 54.3% (170/313), and 52.3% (67/128) for older adults aged 60 to 69, 70 to 79, 80 to 89, and 90 and older, respectively. Moreover, 94% of the 5,700 patients had at least one comorbidity including hypertension (56.6%) and diabetes (33.8%). These conditions increased the risk for in-hospital death in those requiring invasive mechanical ventilation (IMV) and the intensive care unit (ICU).<sup>3</sup> Chronic obstructive pulmonary disease (COPD) and underlying cardiovascular disorders were independent risk factors for IHM in patients with confirmed COVID-19 infection.<sup>2</sup> Because in-hospital death, IMV, and ICU admission are the terminal events, the high IHM rate might mask any significant effects of risk factors such as diabetes mellitus, hypertension, coronary artery disease, and COPD. The independent association of lower lymphocyte count with in-hospital death might be modified when including admission to ICU and IMV in further multivariable analyses.

Generally, the IHM rate is much higher than the case fatality rate (CFR). CFR of those COVID-19 patients aged 60 and older was 6.0% (829/13,909) in Mainland China<sup>4</sup> and 12.3% (1,567/12,695) in Italy.5 The COVID-19 patients aged 60 and older comprised largely 81.0% of the overall 1,023 deaths but fractionally 31.1% of the total 44,672 confirmed cases.<sup>4</sup> Among the 44,672 confirmed COVID-19 cases in Mainland China<sup>4</sup> as of February 11, 2020, CFR was .6% (194/30,763), 3.6% (309/8,583), 8.0% (312/3,918), and 14.8% (208/1,408) for those aged 0 to 59, 60 to 69, 70 to 79s, and 80 and older, respectively. The corresponding CFR by age group in Italy confirmed COVID-19 cases was .6% (57/9,817), 3.5% (139/3,971), 12.8% (578/4,516), and 20.2% (850/4,208), with a CFR of 12.3% (1,567/12,695) for all those 60 and older. 5 As of May 19, 2020, IHM rate from the New York City Health Department was 31.7% (16,059/50,618) for all the patients, 47.9% for the patients aged 65 and older, and 17.8% for patients aged 0 to 64.6 All the IHM rates are much higher than the corresponding CFR (31.7% vs 8.4%, 47.9 vs 26.6%, and 17.8% vs 3.4%). Therefore, the risk factors for mortality might be different between hospitalized patients and confirmed cases. Consistently, age 65 and older is an independent risk factor for death, cardiovascular events, and terminal events requiring IMV and ICU admission.

On April 13, 2020, the *China Daily* reported an announcement from the China National Health Commission that nearly 70% of the more than 3,000 COVID-19 patients in Wuhan aged older than 80 years had recovered, achieving an IHM rate as low as 30% when considering that 90% and 40% of whom, respectively, had multiple comorbidities and critical illness. Wuhan, the Chinese city hit hardest by the outbreak, also had China's oldest coronavirus survivors, seven patients who were older than 100 years, with the eldest 108, who had recovered and been discharged from hospitals. This is really an achievement with the input of

medical resources including labor, materials, and financial resources, investment in nursing, psychological counseling, and multidisciplinary care during hospitalization up to 60 days.

Last but not least, long-term care for those aged 65 and older who were discharged from the hospital is also particularly critical to prevent future fatal infection, especially among those who have consciousness disorders and cognitive dysfunction, and are living in nursing homes. <sup>9,10</sup>

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