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Contents lists available at ScienceDirect

American Journal of Emergency Medicine

journal homepage: www.elsevier.com/locate/ajemThe
American Journal of
Emergency Medicine

The authors respond: the impact of COVID-19 on ED utilization, case mix and functions



We applaud Lai et al. in this *Letter to the Editor* for exploring changes in acute care utilization in Taiwan related to COVID-19. Their result, that ED visits fell by between 21.3% and 36.3% compared to prior years during the Lunar New Year Holiday in 2020, and that they fell by even larger margins for influenza-like-illnesses, is comparable to findings from the United States [1,2], the UK [3], and Japan [4]. In Taiwan, COVID-19 control measures likely contributed to a change in the baseline population incidence of pathologies with infectious etiology. They may have also contributed to changes in care-seeking behavior in Taiwan, despite the success of the island-nation in managing the COVID-19 pandemic.

Indeed, there has been a sea-change in the case mix of emergency department presentations throughout the world, despite tremendous variation in the implementation of COVID-19 nonpharmaceutical interventions, as well as COVID-19 case counts and fatality rates. ED demand is a function of the physical and social environment and the epidemiology of the underlying illnesses and injuries managed [5]. COVID-19 represents a ‘natural experiment,’ albeit a messy one, to tackle some of the most important open questions in emergency care and health services research:

- Which conditions that may have historically been managed with hospital-based resources can be managed by leveraging telemedicine and outpatient resources [6]?
- Which conditions are emergency care-sensitive; that is, for which conditions “does high-quality emergency care make a unique contribution to patient outcomes” [7]?
- Given reports of huge spikes in excess mortality [8], how do changes in care-seeking impact population-level morbidity and mortality?
- Which populations are most vulnerable to changes in access to or propensity to seek out emergency care [9]?

The true scope of the collateral damage wrought by COVID-19, especially in nations with comparatively less success with early nonpharmaceutical interventions, will remain the focus of research for years to come. The pandemic will surely result in a rethinking of many dimensions of emergency care, but we suspect that its value will be

validated in the work to come: as a backstop of pandemic preparedness for overwhelmed health systems, as the key weigh station for the complex management of emergency care-sensitive conditions, and as a safety net for vulnerable populations.

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1 March 2021