## The Impact of COVID-19 Pandemic on the Use of Emergency Medical Services System in Bangkok, Thailand

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## Abstract

Coronavirus disease 2019 (COVID-19) has widely affected the global public health system, especially the emergency medical service (EMS), which has been the first responders since 2020. However, this pandemic persists with still limited studies on its impact on EMS. This study aimed to compare the number of EMS patients and the operation periods of Bangkok EMS in Thailand between 2020 (severe COVID-19 pandemic) and 2019 (prepandemic). Data of patients with severe COVID-19 were collected from the emergency medical information system of Bangkok EMS center. Data were compared between the two periods. A total of 178,594 patients were serviced by EMS, with 93,288 during the study period and 85,306 during the control period. The study period had more EMS patients overall by 9.36% (95% confidence interval [CI]: 9.16–9.55) and significantly more EMS patients per day, with a mean difference of 21.19 (254.90  $\pm$  25.55 vs. 233.71  $\pm$  23.49; 95% CI: 17.63–24.76, p < 0.001), than the control period. Furthermore, all EMS operation periods were significantly longer during the study period. The COVID-19 pandemic period had more patients managed by EMS and longer EMS operation periods than the prepandemic period.

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