

- The lengths of stay in frequent ED users during the COVID-19 pandemic were significantly shorter than that in frequent ED users before the COVID-19 pandemic.

Impact of the COVID-19 pandemic on emergency healthcare utilization: a cohort study

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Background:

Emergency department (ED) crowding is a burden on public health, so understanding the characteristics of frequent ED users is a key concern of the healthcare system and policy makers. This study aims to examine the characteristics and healthcare-seeking behaviors in frequent ED users before and during the COVID-19 pandemic.

Methods:

A retrospective observational study was conducted on ED users aged 18 years and over admitted to Taipei City Hospital in February 2019-January2020 (before pandemic) and February 2020-January2021 (during pandemic) (N = 120,011). Frequent and ED users were defined as patients with four or more ED visits in a year. Multivariate logistic regression was used to identify the predictors of frequent ED use before and during the COVID-19 pandemic.

Results:

Monthly emergency department visits were significantly lower during the pandemic (by 10.1-26.8%). Frequent ED patients had shorter lengths of stay in the ED during the pandemic (212.5 vs.233.9 minutes; $P < 0.0001$). The proportion of ED patients receiving chest CT examination during the pandemic has increased by 0.5-0.6%. After adjusting for sociodemographic factors, triage status, mode of arrival, and copayment exemption, patients with a triage status of level 4-5 (AOR=1.60, 95% CI: 1.13-2.28), diagnosis of pneumonia (AOR=1.85, 95% CI: 1.07-3.17), giddiness (AOR=2.85, 95% CI: 1.82-4.45), dyspnea (AOR=1.85, 95% CI: 1.00-3.39), or chronic kidney disease (AOR=5.05, 95% CI: 2.66-9.59) were more likely to be frequent ED visitors during the pandemic.

Conclusions:

Since SAR-CoV-2 is highly contagious, it is imperative to educate non-emergent patients to utilize outpatient medical services rather than emergency medical services to reduce the risk of COVID-19 outbreaks at the ED.

Key messages:

- This study found that the utilization of emergent medical services during the COVID-19 pandemic significantly decreased by 10.1%–26.8% compared to before the COVID-19 pandemic.