



Mini Review

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# A Review of the Impact of COVID-19 on Emergency Departments: Decrease in ED Visits Throughout the Pandemic

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## Introduction

As COVID-19 cases across the United States climbed in the first half of 2020, emergency departments experienced a proportional decline in visits during that time. With stay-at-home orders enacted to limit community transmission of disease, healthcare utilization changed [1]. Accounting for all ages and causes, ED visits declined by 42% during the early stages of the pandemic. This is shortly after the WHO declared a pandemic and the US proclaimed a state of national emergency [2,3]. Fear of contracting infectious disease as well as nationwide concern regarding PPE stopped patients from coming to the ED [4,5]. This brings into question whether or not patients are delaying seeking care for emergent matters, how different populations are affected, and what the future of patient care entails.

## The Impact of Age

Due to their less robust immune systems, elderly patients have generally been touted as one of the most vulnerable groups in contracting infectious diseases. COVID-19 is affecting the older age groups disproportionately, causing worse outcomes and higher mortality rates than younger patients, especially in the presence of comorbid conditions [6]. On the other hand, the pediatric population is less severely affected than adults in terms of contraction and morbidity and thus thought to fare better in the ED [7,8]. However, the younger age groups actually have the greatest percentage decline in ED visits. Although total ED visits spanning all ages have decreased 42%, visits by children aged ≤10 years and

11-14 years have decreased 72% and 71%, respectively [9]. This suggests that younger individuals, compared to older individuals, more likely visited the ED for non-emergent cases pre-COVID and thus are able to avoid such visits now.

## Life-Threatening Visits

Surprisingly, life-threatening ED visits have declined, most significantly in adults 65 years and older. ED visits for MIs, strokes, and hyperglycemic crises have decreased 23%, 20%, and 10%, respectively [10,11]. Given that incidence rates of these conditions remain relatively stable, it is highly unlikely they would drastically change in a matter of months. Patients are instead delaying or avoiding time-sensitive diagnoses and treatment for serious conditions out of fear of infection [12,13]. Furthermore, patients with such conditions often have comorbidities that increase their risk of mortality and worsen their anxiety about visiting an ED.

## Alternative Methods of Triage

Complaints of abdominal and gastrointestinal pain as well as musculoskeletal pain account for the largest drops in ED visits [19]. Although these patients are not coming into the ED as frequently as before, this does not mean that they are forgoing medical attention altogether. Numerous hospitals and clinics have been able to offer alternatives like triaging via telemedicine for non-life-threatening concerns [14]. Patients are also contacting their primary care providers more often to be managed safely in the outpatient setting [15].

## Disproportionate Effects Based on Socioeconomic Status

Low socioeconomic status is widely associated with an increase in disease risk and mortality [16,17]. While the majority of decreased ED visits were for ambulatory care, there was a slow, steady rise in visits for socioeconomic or psychosocial factors, as well as mental health and substance use disorders in remission. Additionally, the closure of mental health clinics and rehabilitation centers in accordance with public health policy left limited options for those seeking care and funneled more of these patients to the ED. COVID-19 disproportionately affected those who use the ED as a safety net, widening the gap in healthcare disparity for marginalized populations [18,19].

## Conclusion

How COVID-19 inadvertently continues to shape the future of healthcare, in particular emergency rooms, is still to be seen. As most of the CDC's public data does not go beyond the first three months of coronavirus' peak, it will be difficult to determine where exactly we are headed from here. If and how quickly ED census picks up to pre-pandemic levels will largely be influenced on the public's anxiety and perceived risks of contagion in the ED and how alternative triage methods expand [20-22]. What is more certain is that public health officials and physicians should continue to emphasize the importance of visiting the ED for serious, life-threatening ailments while following guidelines to use telemedicine for appropriate concerns.

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