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Assessing the Impact of the COVID-19 Pandemic on EMS Transport Patterns for Patients with Suspected Acute Coronary Syndrome

AUTHORS **Remie P. Crowe, PhD, NREMT; Antonio R. Fernandez, PhD, NRP; Scott Bourn, PhD, RN; J. Brent Myers, MD, MPH**

Background

During the COVID-19 pandemic, patients experiencing time-sensitive emergencies may be hesitant to seek care at an emergency department due to fear of the virus.

Objective

To describe changes in EMS use and transport patterns for patients with suspected acute coronary syndrome (ACS) during the COVID-19 pandemic compared to a control period one year prior.

Methods

Study Design & Setting

Retrospective cohort study
Data source: ESO Data Collaborative research database (Austin, TX)
Study period: March 1, 2020 to May 31, 2020
Control period: March 1, 2019 to May 31, 2019

Measures

Outcome: EMS transport
Independent variables: patient age, sex, race/ethnicity

Analysis

Inclusion criteria: Adult patients (18 and older) with EMS provider impression related to ACS.
Descriptive statistics were calculated.
Multivariable logistic regression models were used to estimate odds of transport by patient characteristics.

Results

In April 2020, EMS call volume for ACS decreased 16%.

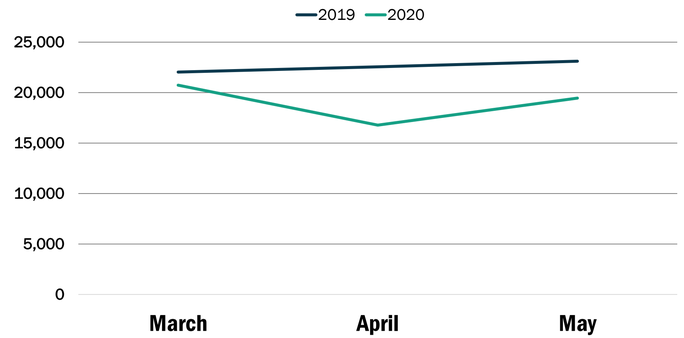

Figure 1. EMS call volume for suspected ACS

Female patients with suspected ACS were less likely to undergo EMS transport.

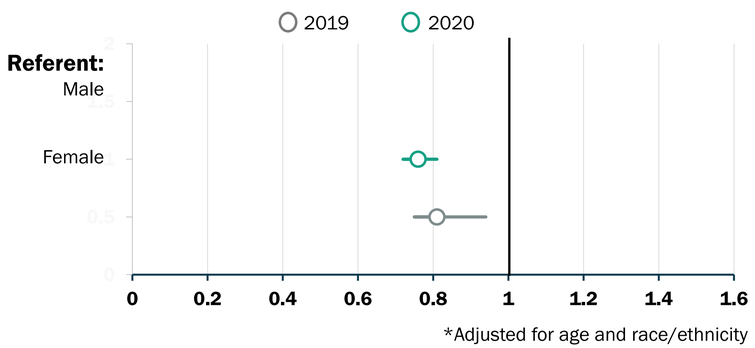

Figure 2. Odds* of EMS transport for patients with suspected ACS by sex

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Results

Patients with suspected ACS who were documented as Black or Hispanic were less likely to undergo EMS transport.

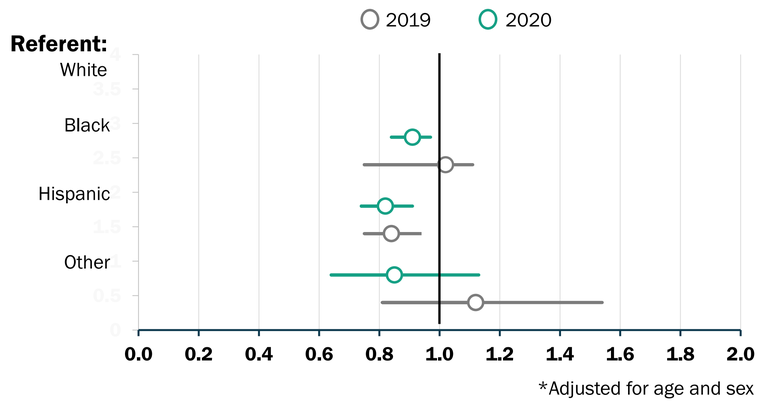

Figure 3. Odds* of EMS transport for patients with suspected ACS by race/ethnicity

Limitations

This was a retrospective analysis of a large convenience sample of EMS records. The logistic regression models may not have accounted for all potential confounding variables related to EMS transport patterns.

Conclusion

Decrease in EMS call volume and increase in non-transport rates for patients with suspected ACS suggest hesitance to seek emergency medical care during the COVID-19 pandemic. Changes in transport patterns differed by patient characteristics and warrant further investigation.