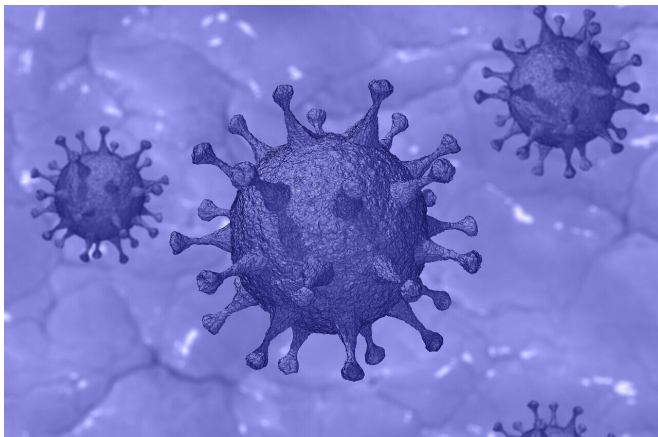


Study characterizes suspected COVID-19 infections in emergency departments in the UK

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Among patients reporting to hospital emergency departments (EDs) with suspected COVID-19 infection, important differences in symptoms and outcome exist based on age, sex and ethnicity, according to a new study published this week in the open-access journal *PLOS ONE* by Steve Goodacre of the University of Sheffield, UK, and colleagues.

Hospital EDs have played a crucial role during the COVID-19 pandemic in receiving acutely ill patients, determining their need for [hospital admission](#), and providing treatment. Appropriate management of the heterogeneous population of patients who are suspected of having COVID-19 is an important challenge that needs to be informed by [relevant data](#).

In the new paper, part of the Pandemic Respiratory Infection Emergency System Triage (PRIEST) study and funded by the National Institute for Health Research (NIHR), researchers collected a

mixture of prospective and retrospective data from 22,445 people presenting to 70 EDs across the UK with suspected COVID-19 infection between March 26, 2020 and May 28, 2020. Data on sex, age, ethnicity, presenting symptoms, [admission](#) to hospital, COVID-19 result, organ support and death was available for each patient 30 days after initial presentation. This study is one of a number of COVID-19 studies that have been given urgent public [health research](#) status by the Chief Medical Officer/ Deputy Chief Medical Officer for England.

On average, those included in the study were 58.4 years old, 50.4% female, and 84.75% white. Adults admitted to the hospital with confirmed COVID-19 were more than twice as likely to die or receive organ support than adults who did not have COVID-19, suggesting a worse outcome from COVID-19 than similar presentations. Compared to children aged 16 years and under, adults were sicker, had higher rates of hospital admission (67.1% vs 24.7%), COVID positivity (31.2% vs 1.2%) and death (15.9% vs 0.3%). Men were also more likely to be admitted to the hospital than women (72.9% vs 61.4%), required more organ support (12.2% vs 7.7%) and were more likely to die (18.7% vs 13.3%).

In addition, ethnicity conveyed some differences—Black and Asian adults tended to be younger than White adults and, while they were less likely to be admitted to the [hospital](#) (Black 60.8%, Asian 57.3%, White 69.6%), they were more likely to require organ support (15.9%, 14.3%, 8.9%) and, importantly, more likely to have a positive COVID-19 test (40.8%, 42.1%, 30.0%).

The authors add: "Our findings show that people attending emergency departments with suspected COVID-19 were seriously ill, suggesting that policies aimed at diverting less serious cases away

from hospitals were successful. We also showed that admission with COVID-19 carries a much higher risk of death or need for life-saving treatment than admission with similar conditions."

More information: Goodacre S, Thomas B, Lee E, Sutton L, Loban A, Waterhouse S, et al. (2020) Characterisation of 22445 patients attending UK emergency departments with suspected COVID-19 infection: Observational cohort study. *PLoS ONE* 15(11): e0240206.
doi.org/10.1371/journal.pone.0240206

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