

## COVID-19 and Increase in OHCA



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COVID-19 has a wide range of presentations including asymptomatic to various intensity of symptomatic patients, some of whom develop acute respiratory distress syndrome and require mechanical ventilation.

COVID-19 first hit in December 2019 in China. Outside of China, Northern Italy was also sufficiently impacted by it, leading to a high number of infections and a steep mortality rate which was even higher than what was seen in China. One key feature observed in Northern Italy was that the number of outpatient deaths during the early phase of the disease was also high - but why and how this was occurring remained a mystery.

Since the COVID pandemic, there were many anecdotal reports indicating the infection was causing an alarming number of out-of-hospital cardiac deaths, especially early in the disease phase. But a clear correlation between the increased incidence of death and COVID 19 was lacking. So far no method of preventing early deaths from COVID-19 in outpatients had been identified.

This [Italian study](#) assessed the relationship between the COVID-19 pandemic and the high incidence of out-of-hospital cardiac deaths. The study looked at all consecutive deaths over two months in the Lombardy region and compared them with those that occurred in the same time period a year ago (2019).

The Italian investigators accessed patient data via a cardiac arrest registry. All the EMS electronic data were reanalysed to assess patients with suspected COVID-19 (fever for a minimum of 3 days before the outpatient cardiac arrest associated with dyspnoea and/or cough) or with a diagnostic pharyngeal swab for COVID-19 performed before or after death. Also, ECGs were evaluated in patients who died and the QTc value was calculated. At the same time, all emergency calls for 2020 and 2019 were compared with regard to the prehospital diagnosis of ST-segment elevation MI.

The cumulative incidence of COVID-19 during the two month study period was 956 COVID-19/100,000 inhabitants and the cumulative incidence of out-of-hospital cardiac deaths was 21 cases/1000,000 inhabitants. This was a 52% increase compared to the previous year (2019). In 2020, there were a total of 490 out-of-hospital cardiac deaths versus 321 in 2019. This difference in death was found to be statistically significant.

The authors concluded that out-of-hospital cardiac deaths from COVID-19 in 2020 were significantly increased compared to the previous years when there was no pandemic. Thus, the government and local health authorities should start to plan strategies to address this issue and determine how outpatient cardiac deaths can be prevented.

Source: [European Heart Journal](#)

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