

# About 5,000 heart attack sufferers in England missed out on lifesaving hospital treatment due to pandemic

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Researchers at the University of Oxford, working with NHS Digital, in collaboration with experts from the University of Keele, the University of Leeds, Imperial College London, University College London, Barts Health NHS Trust and the Royal Brompton & Harefield NHS Foundation Trust, have published new research that shows that only two-thirds of the expected admissions with heart attacks took place at the end of March 2020.

By the end of May, admission rates had partially recovered, but remained below expected levels. In total, by the end of May there had been about 5000 fewer admissions with [heart](#) attack in 2020 than would be expected, suggesting that many patients have missed out on lifesaving treatment.

The study, published today in *The Lancet*, used data regularly collected by NHS Digital from NHS Hospital Trusts in England to get up-to-date information about admissions to hospital.

Researchers documented a reduction in admissions with heart attack in England at the start of the COVID-19 pandemic by comparing weekly rates in 2020 with those observed in 2019. They are continuing to monitor these trends and will post updated results every month at [www.ctsu.ox.ac.uk/research/COVID-19/e-coronary-syndromes](http://www.ctsu.ox.ac.uk/research/COVID-19/e-coronary-syndromes).

Admissions with heart attacks caused by a complete blockage of an artery to part of the heart—called "ST-elevation" heart attacks because of the typical changes seen on the electrocardiogram (ECG)—fell by nearly a quarter (23%). People with this sort of heart attack are at the highest risk of suffering a cardiac arrest and usually need an urgent procedure (a percutaneous coronary intervention, or PCI) to open the blocked artery to the heart, along with medications.

Rates of admission for heart attacks caused by a partial blockage of blood supply to the heart ("non-ST elevation" heart attacks) fell by 42%. Patients with this type of heart attack need urgent assessment and treatment with medications, while many also benefit from an urgent procedure to open a narrowed artery to the heart.

Dr. Marion Mafham, Clinical Research Fellow at the Nuffield Department of Population Health, University of Oxford, and lead author of the study said, "Our study shows that far fewer people with heart attacks have attended hospital during this pandemic. It is important that anyone with chest pain calls an ambulance immediately, because every minute of delay increases the risk of dying or experiencing serious complications from a heart attack."

There was a similar pattern of reduced admissions in different demographic groups. The study found

that there was an increase in the proportion of patients receiving procedures to open blocked arteries on the day of admission, and a reduction in the length of stay.

Senior author Professor Colin Baigent, Director of the Medical Research Council Population Health Research Unit at the University of Oxford, said, "Some people may still be worried about going to hospital because they fear encountering the coronavirus. But the truth is that, by delaying or not going to hospital, people with heart attacks are at much greater risk of dying from their [heart attack](#) than catching the virus, and the NHS is ready and able to provide excellent cardiological care."

A similar pattern of reduction in the numbers of patients attending hospital with heart attacks, and in the numbers receiving PCI, has been observed in several other European countries, as well as in the United States, during the COVID-19 pandemic. In addition, it has been reported that those presenting to hospital often do so beyond the optimal window for primary PCI.

Senior author Barbara Casadei, British Heart Foundation Professor in Cardiovascular Medicine at the University of Oxford, and President of the European Society of Cardiology, said, "These findings must be taken into serious consideration in the event that a second pandemic wave develops as lockdown restrictions are eased worldwide. Medical societies, heart foundations, and governments have a responsibility to not only inform patients of the importance of seeking appropriate care, but also to ensure that a safe environment is provided for patients who are admitted to hospital because of a cardiovascular emergency."

This research highlights the value to the NHS of researchers being able to gain rapid access to routine healthcare data to address important clinical questions. Tom Denwood, Executive Director Data, Insights and Statistics, at NHS Digital said "It was a privilege to make this research possible, in partnership with our academic colleagues, through the provision of our platforms and data, our engineering and analytical expertise, and through our collaborative approach.

"By making the data submitted by NHS providers more rapidly available for secure analysis, we were able to deliver together at pace, and to inform ongoing policy-making in response to COVID-19."

**More information:** *The Lancet* (2020). [www.thelancet.com/journals/lan ...](http://www.thelancet.com/journals/lan...) (20)31356-8/fulltext

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