

Thousands missed heart attack treatment during pandemic

July 15 2020



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A third of people with heart attacks may not have gone to hospital at the start of the COVID-19 pandemic.

New research involving the University shows that only two thirds of the expected number of patients with [heart](#) attacks were admitted to hospital between the middle of February and 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 5,000 fewer admissions with heart attack in 2020 than would be expected, suggesting that many patients have missed out on lifesaving treatment.

Chris Gale, Professor of Cardiovascular Medicine at Leeds' School of Medicine and one of the study's authors, said: "One of the unintended consequences of the 'stay at home' message during the peak of the pandemic is that fewer people were seeking help for medical emergencies such as a heart attack. There is little doubt that this will have had substantial repercussions on population health outcomes. People will have died or developed heart failure as a result of not seeking treatment for their heart attack."

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.

The researchers were from the universities of Leeds, Oxford, Keele, University College London, Imperial College London, Barts Health NHS Trust and NHS Digital.

They 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 updated results will be

posted every month.

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.

Delays risk lives

Dr. Marion Mafham is Clinical Research Fellow at the Nuffield Department of Population Health, University of Oxford, and lead author of the study. She 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 across different demographic groups.

A similar drop 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.

Barbara Casadei, British Heart Foundation Professor in Cardiovascular Medicine at the University of Oxford and President of the European Society of Cardiology, also contributed to the study.

She 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: Marion M Mafham et al. COVID-19 pandemic

and admission rates for and management of acute coronary syndromes in England, *The Lancet* (2020). [DOI: 10.1016/S0140-6736\(20\)31356-8](https://doi.org/10.1016/S0140-6736(20)31356-8)

Provided by University of Leeds

Citation: Thousands missed heart attack treatment during pandemic (2020, July 15) retrieved 23 November 2023 from

<https://medicalxpress.com/news/2020-07-thousands-heart-treatment-pandemic.html>

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