



London

Cite this as: *BMJ* 2020;370:m2852<http://dx.doi.org/10.1136/bmj.m2852>

Published: 15 July 2020

Covid-19: Data show 5000 fewer hospital admissions for acute coronary syndrome during pandemic

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Around 5000 fewer people were admitted to hospitals in England for acute coronary syndrome than expected from January to the end of May this year, an analysis has shown. The results, published in the *Lancet*, indicate that many patients have missed out on lifesaving treatments during the covid-19 outbreak.¹

From mid-February 2020 admissions fell from a 2019 baseline rate of 3017 a week to 1813 a week by the end of March, a reduction of 40% (95% confidence interval 37% to 43%). The authors also observed a partial recovery in admissions from April, and by the last week of May there were 2522 admissions a week—a 16% (13% to 20%) reduction from baseline.

By the end of March 2020 admissions for ST-elevation myocardial infarction (STEMI) had fallen by 23% (16% to 30%) to 477, from the 2019 average of 621, while in the same period admissions for non-STEMI fell by 42% (38% to 46%), from 1267 to 733.

This decline started before the UK lockdown began on 23 March and “was qualitatively similar throughout the country, with only minor variations ... in different demographic groups,” the authors wrote.

Among patients admitted to hospital with acute myocardial infarction there was a “sustained increase in the proportion ... receiving [a percutaneous coronary intervention (PCI) for acute myocardial infarction] on the day of admission and a continued reduction in the median length of stay,” they added.

“The reduced number of admissions ... is likely to have resulted in increases in out-of-hospital deaths and long-term complications of myocardial infarction and missed opportunities to offer secondary prevention treatment for patients with coronary heart disease,” they concluded.

When asked for his view on the findings, Nick Linker, NHS England’s national clinical director for heart disease, said, “NHS staff pulled out all the stops to treat over 100 000 people for coronavirus in hospitals during the pandemic, but they also made sure that everyone who needed urgent and emergency treatment for other conditions, including for heart attacks and strokes, could get it in a safe way.”

An NHS England spokesperson also pointed that Public Health England’s weekly emergency department syndromic surveillance report seemed to show that, after dropping in March, cardiac presentations in emergency departments have been above baseline levels since early May.²

When asked about the apparent discrepancy, the lead author of the *Lancet* report, Marion Mafham, from Oxford University’s Nuffield Department of Population Health, said, “The PHE report is based on the emergency care dataset, which records the provisional diagnosis made in A&E. The data used in our paper are based on the coded diagnosis recorded by the hospital at the end of an inpatient episode of care so may be more accurate in terms of identifying people who suffered a heart attack.”

Mafham said her team would be publishing updated analyses each month online, to track whether weekly admissions return to normal or rise above the historical baseline.

Although lacking quantitative information about admission patterns and in-hospital management, similar observations have been made in Spain, Italy, Austria, and the US. It has also been reported that people presenting to hospitals often do so beyond the optimal window for primary PCI.

Barbara Casadei, professor of cardiovascular medicine at Oxford University, said, “These findings must be taken into serious consideration in the event that a second ... wave develops as lockdown restrictions are eased worldwide.”

1 Mafham MM, Spata E, Goldacre R, et al. COVID-19 pandemic and admission rates for and management of acute coronary syndromes in England. *Lancet* 2020;14. doi: 10.1016/S0140-6736(20)31356-8.

2 Public Health England. Emergency department syndromic surveillance system: England. 5 Jul 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/898830/EDSSSBulletin2020wk27.pdf.