

Impact of COVID-19 on hospital admissions for acute coronary syndromes (updated analyses including admissions up to 21 June 2020)

Introduction

Researchers in the Nuffield Department of Population Health and the Radcliffe Department of Medicine, working with NHS Digital and a team of experts from other UK universities, analysed the number of admissions to hospitals in England for acute coronary syndrome (ACS) during the COVID-19 pandemic.

Results based on data collected by NHS Digital from NHS Hospital Trusts in England up to 24 May 2020 were published in *The Lancet* on 14 July 2020.¹ Updated analyses are published here each month during the COVID-19 pandemic.

Updated Methods

The study methods are described in the main publication and supplementary appendix.¹ This updated analysis includes admissions for ACS from all 147 acute hospital NHS trusts in England from 1 January 2019 to 21 June 2020.

Updated figures

Figure 1: Weekly numbers of admissions with an acute coronary syndrome, by type

Figure 2: Weekly numbers of admissions with an acute coronary syndrome that received a particular coronary procedure

Figure 3: (a) Weekly numbers and (b) weekly proportions of admissions to acute NHS hospital trusts with an acute coronary syndrome that received percutaneous coronary intervention on day of admission

Figure 4: (a) Weekly numbers and (b) weekly proportions of admissions to acute NHS hospital trusts with an acute coronary syndrome that received any percutaneous coronary intervention

Figure 5: Weekly median and interquartile range of length of stay for admissions to acute NHS hospital trusts with an acute coronary syndrome, by type

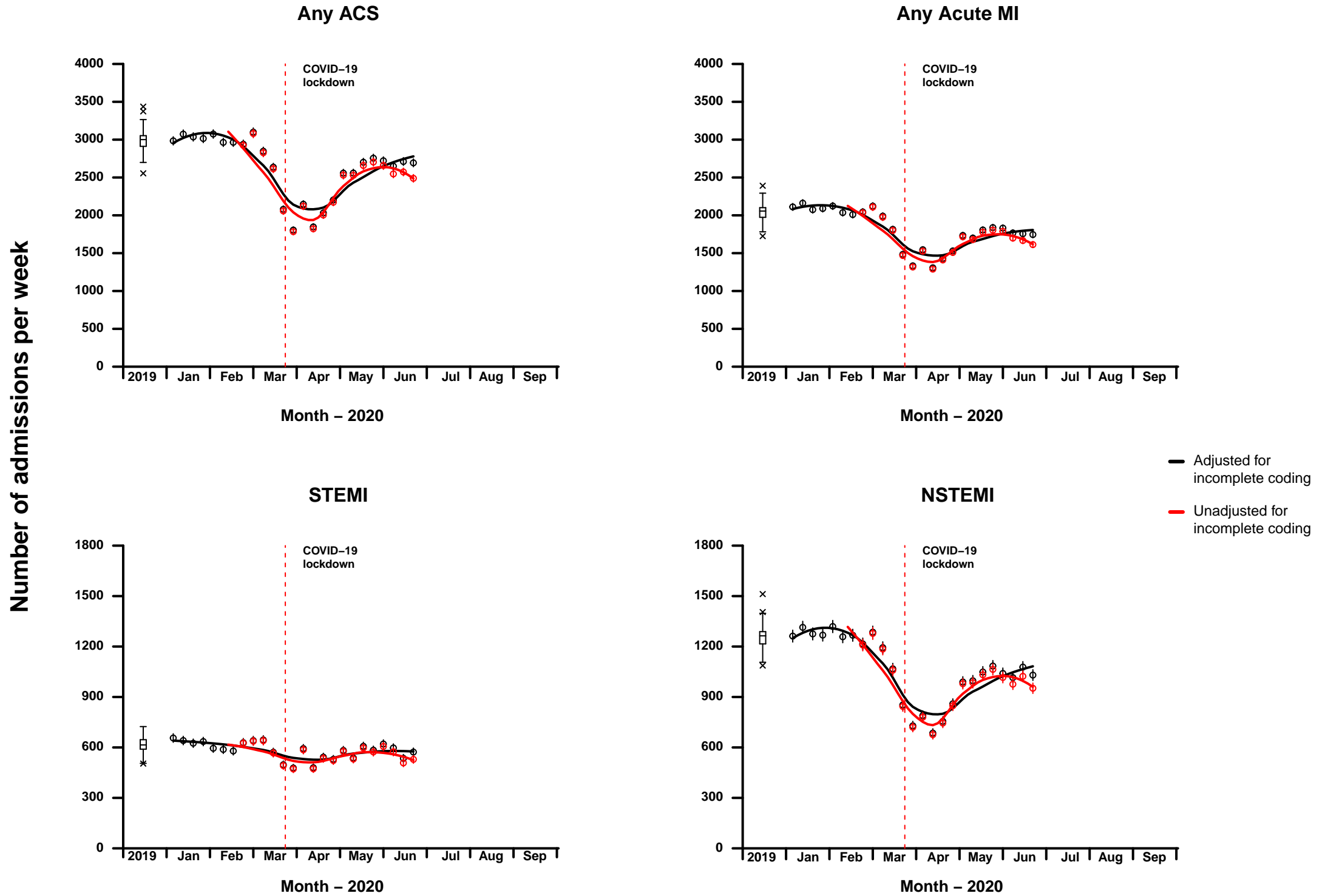
Figure 6: Weekly number of admissions to acute NHS hospital trusts with an acute coronary syndrome, by age, sex, Charlson index, ethnicity and region

Summary

As described in the main publication, weekly admissions for ACS fell between the middle of February and the end of March 2020, with larger reductions in non-ST-elevation myocardial infarction (NSTEMI) than ST-elevation myocardial infarction (STEMI) admissions. These updated analyses show that, after accounting for incomplete coding by NHS hospitals (see supplementary methods provided online with the main publication), weekly ACS admissions were approaching the 2019 weekly average by the end of June 2020. The weekly number of ACS admissions involving percutaneous coronary intervention (PCI) on the day of admission, PCI after the day of admission or only diagnostic angiography had returned to approximately expected levels, however ACS admissions involving coronary artery bypass graft surgery remained low. Updated analyses will be available monthly at <https://www.ctsu.ox.ac.uk/research/covid-19-acute-coronary-syndromes>.

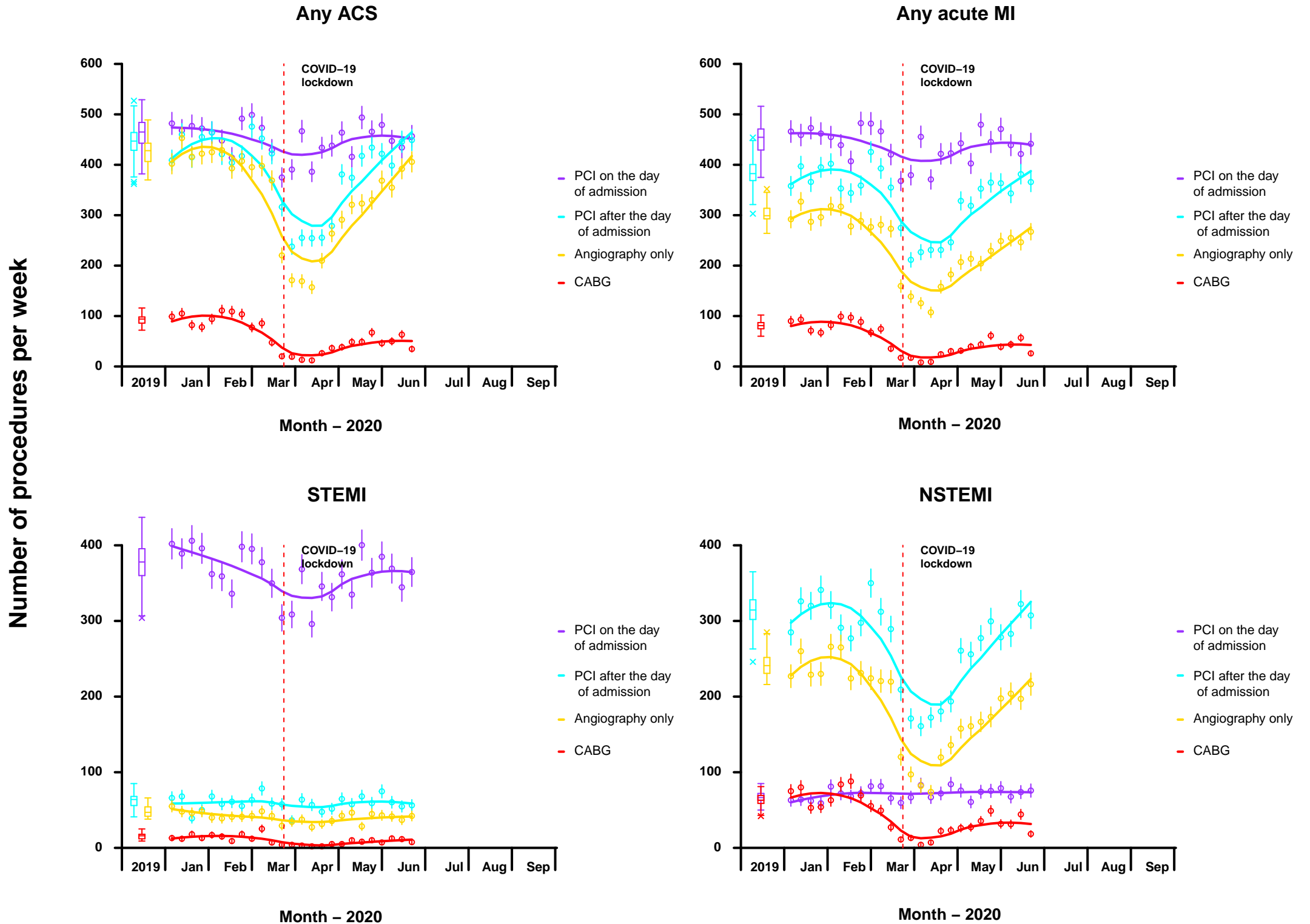
1. Mafham MM, Spata E, Goldacre R, et al. COVID-19 pandemic and admission rates for and management of acute coronary syndromes in England [published online ahead of print, 2020 Jul 14]. *Lancet*. 2020;S0140-6736(20)31356-8

Figure 1: Weekly numbers of admissions to acute NHS hospital trusts with an acute coronary syndrome, by type



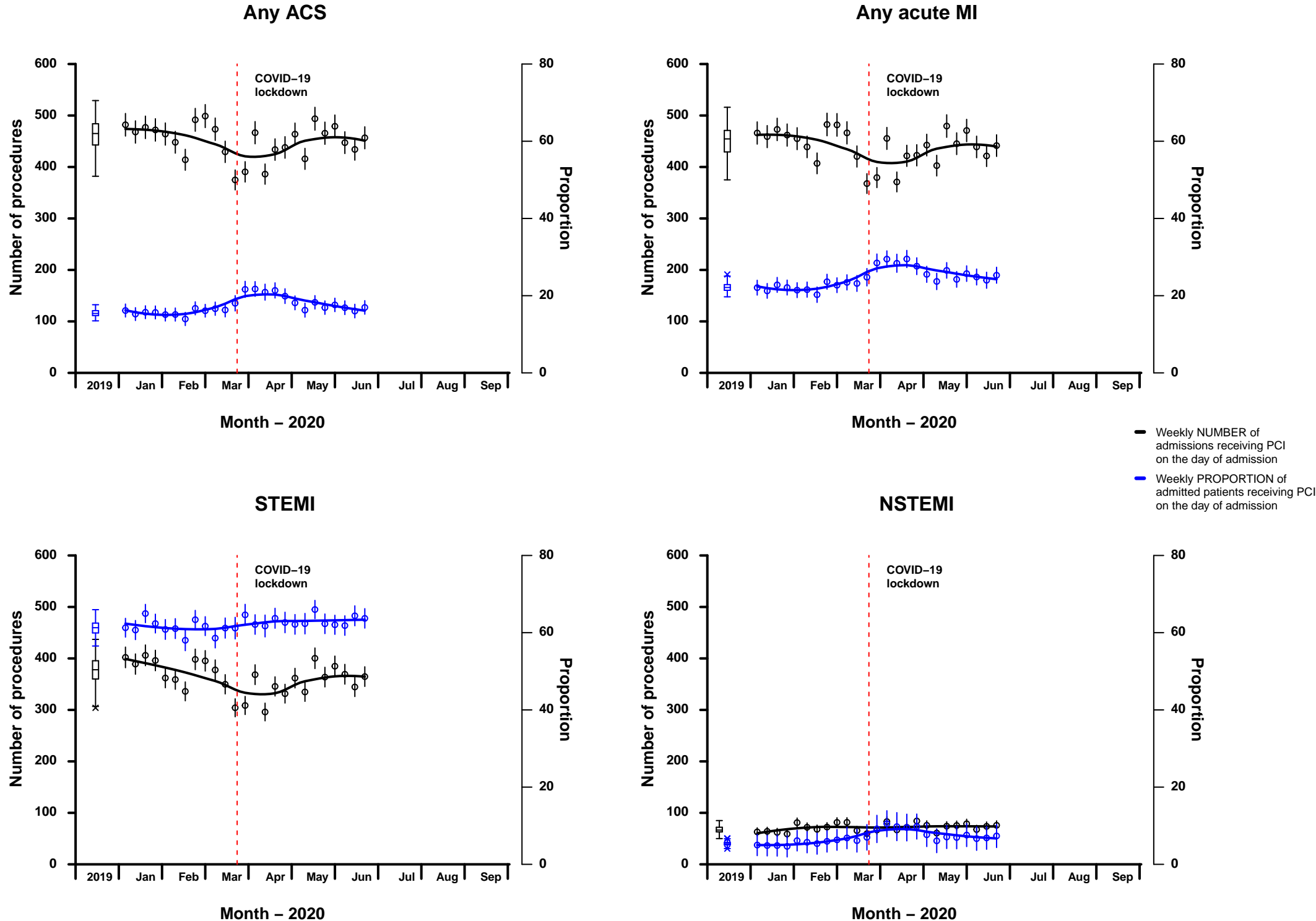
For weekly admissions in 2019, boxplots shows the median and IQR, with whiskers extending (up to) 1.5 times the IQR above the upper quartile and below the lower quartile, with any weekly counts beyond those ranges indicated by x. For 2020, a LOESS smoothing spline is fitted through the weekly reported counts, with datapoints and SEs plotted. The date of the UK COVID-19 lockdown (March 23, 2020) is shown with a vertical dotted line. ACS=acute coronary syndrome. STEMI=ST-elevation myocardial infarction. NSTEMI=non-ST-elevation myocardial infarction. LOESS=locally estimated scatterplot smoothing.

Figure 2: Weekly admissions to acute NHS hospital trusts with an acute coronary syndrome that received a particular coronary procedure



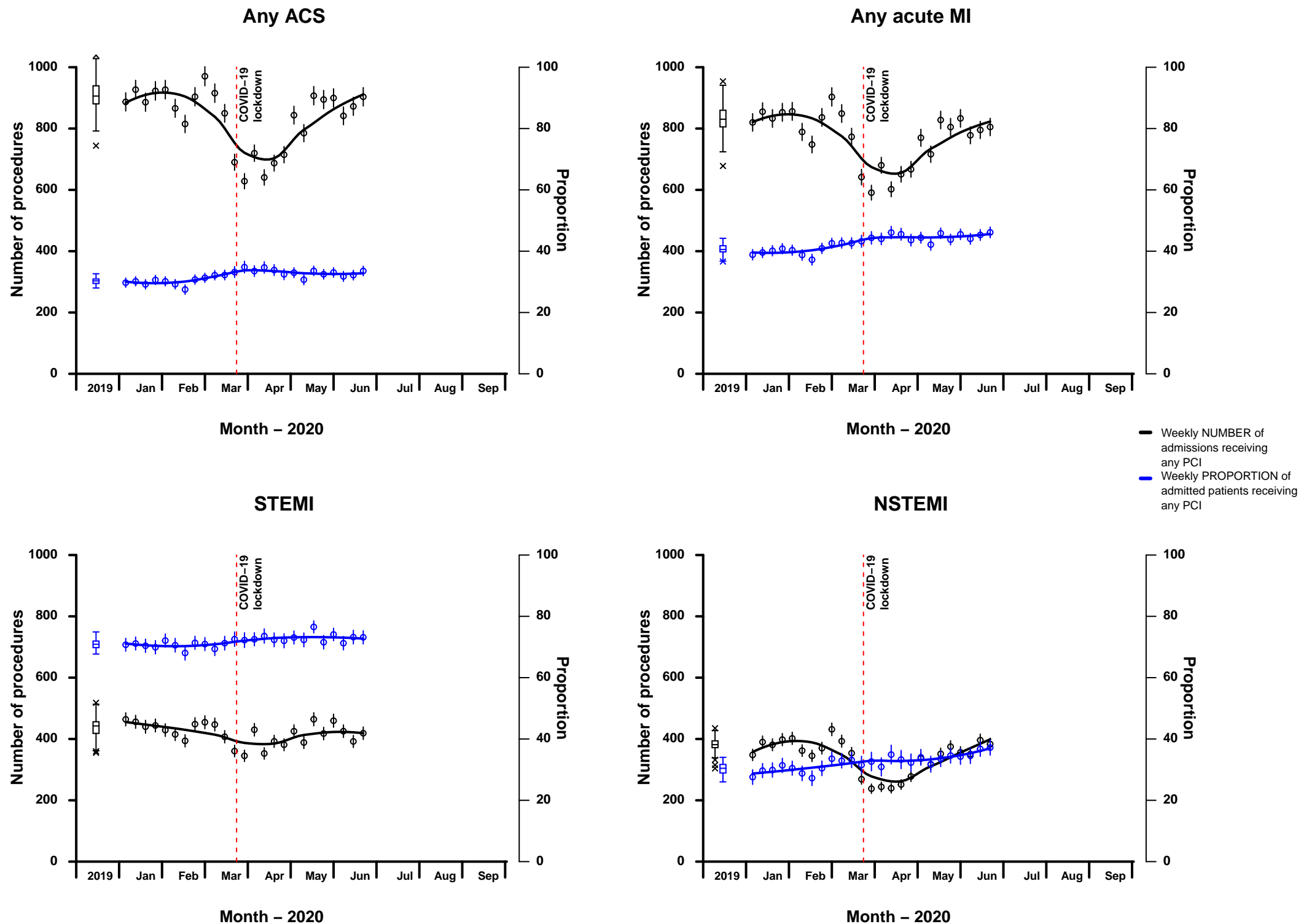
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Figure 3: (a) Weekly numbers and (b) weekly proportions of admissions to acute NHS hospital trusts with an acute coronary syndrome that received percutaneous coronary intervention on day of admission



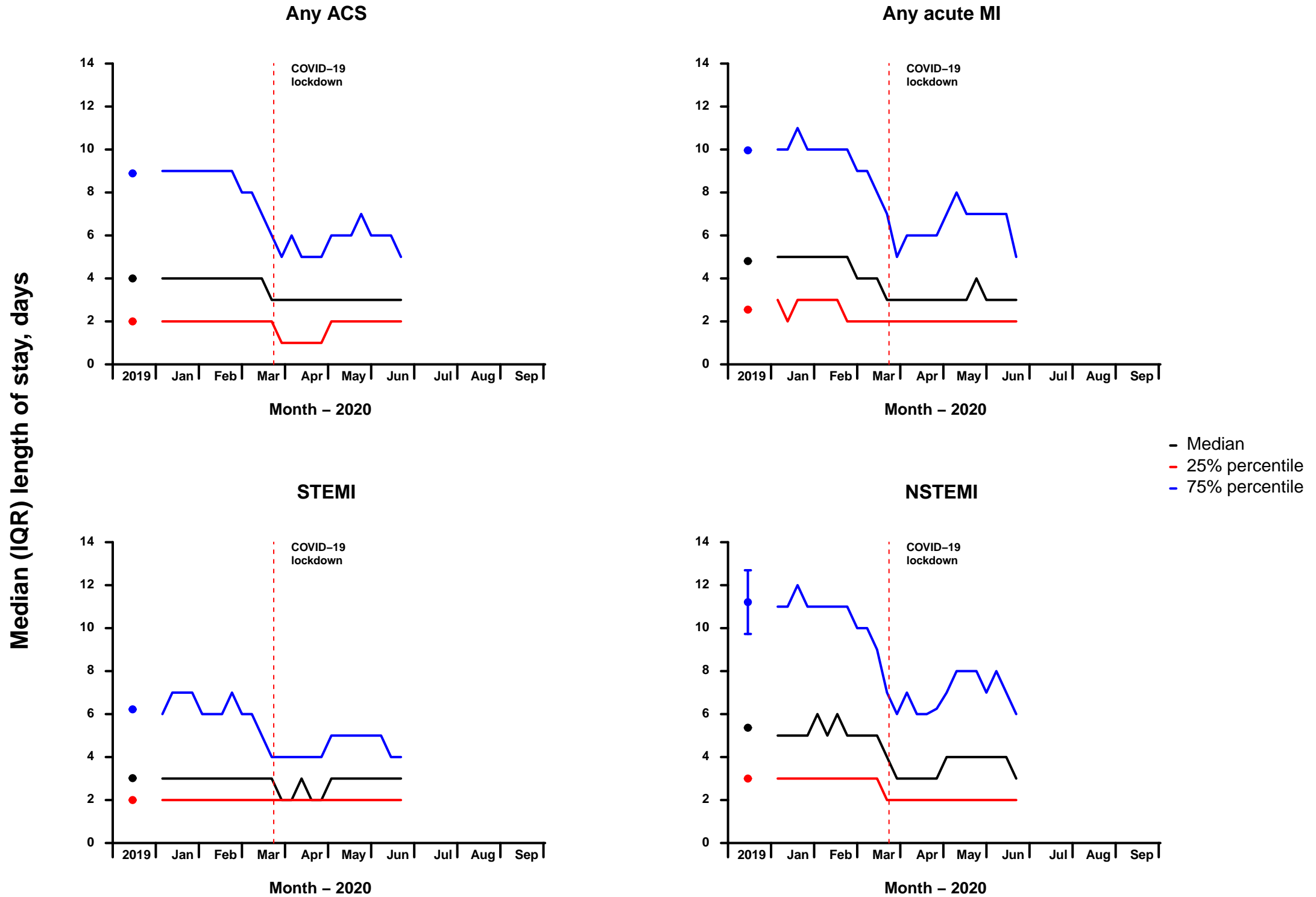
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Figure 4: (a) Weekly numbers and (b) weekly proportions of admissions to acute NHS hospital trusts with an acute coronary syndrome that received any percutaneous coronary intervention



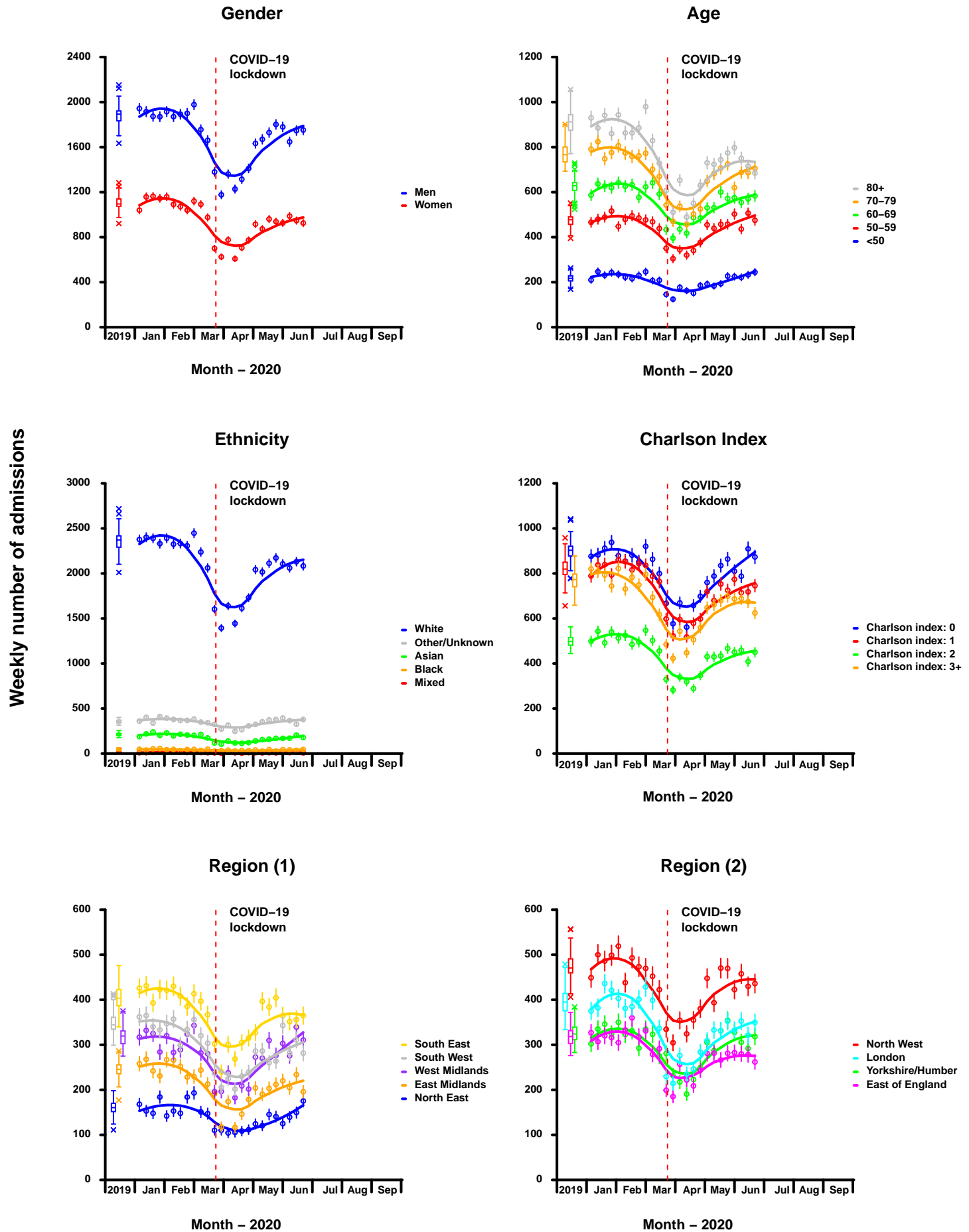
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