

# How to maintain a Cardiac Surgery Service amidst a Global Pandemic?

Zak Mouyer

Imperial College London, University of Manchester, Wythenshawe Hospital Manchester Foundation Trust, UK

Abstract

**Objectives:**

- 1) What is the SARS-CoV-2 virus?
- 2) How has the COVID-19 pandemic affected cardiac surgery globally?
- 3) How did a leading cardiac surgery centre in England cope and endure the pandemic?
- 4) What suggestions have been looked into for future planning and service protection?

**Methods:** In this report, the tangible effect withstood by this cardiac surgery service was assessed by analysing data collected as an audit from four different time points: Pre-COVID, England's 1st Peak, England's 2nd Peak and the Present Day. Parameters included: total surgeries conducted, cancellations, cancellations due to a shortage of cardiothoracic critical care unit (CTCCU) beds and weekly averages for the aforementioned.

**Results:** Results showed a significant drop in surgical output during the first peak (79.6% decreased output from Pre-COVID) and a large increase in cancellations both generally (from 25.1% to 28.2%) and due to CTCCU bed shortage (from 36.2% to 45.5%). However, a strong comeback was seen during the second peak (47.8% decreased output from Pre-COVID and 2.4% fewer cancellations), and an almost complete optimisation of service was observed in the Present day (45.1% increased output from Pre-COVID and 8.9% fewer cancellations).

**Conclusion:** This trust's cardiac surgery service has adapted immensely; this audit has reported the list of measures taken to achieve this and the recommendations to achieve future surgical optimisation. The Trust managed to optimise its service and outperformed itself both from Pre-COVID and internationally. With further refining using PLECS and Canadian Society of Cardiac Surgeons guidance, full optimisation is feasible.

**Biography**

Zak Mouyer is a 5<sup>th</sup> Year Medical Student currently completing an intercalated BSc at Imperial College London in Cardiovascular Sciences.